



#4

SEQUENCE LISTING

<110> ZOZULA, SERGEY

<120> HUMAN OLFACTORY RECEPTORS AND GENES ENCODING SAME

<130> P 0278005

<140> 09/804,291

<141> 2001-03-13

<150> 60/188,914

<151> 2000-03-13

<150> 60/192,033

<151> 2000-03-24

<150> 60/198,474

<151> 2000-04-14

<150> 60/199,335

<151> 2000-04-24

<150> 60/207,702

<151> 2000-05-26

<150> 60/213,849

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<151> 2000-08-16

<150> 60/230,732

<151> 2000-09-07

<150> 60/266,862

<151> 2001-02-07

<160> 529

<170> PatentIn Ver. 2.1

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<211> 325

<212> PRT

<213> Homo sapiens

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Gln Asp Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu Gly Met Tyr.
35 40 45

Leu Val Thr Val Ile Gly Asn Gly Leu Ile Ile Val Ala Ile Ser Leu
50 55 60

Asp Thr Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala Asn Leu Ser

65	70	75	80
Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys Met Leu Val	85	90	95
Asn Ile Gln Thr Lys Ser Gln Ser Ile Ser Tyr Glu Ser Cys Ile Thr	100	105	110
Gln Met Tyr Phe Ser Ile Val Phe Val Val Ile Asp Asn Leu Leu Leu	115	120	125
Gly Thr Met Ala Tyr Asp His Phe Val Ala Ile Cys His Pro Leu Asn	130	135	140
Tyr Thr Ile Leu Met Arg Pro Arg Phe Gly Ile Leu Leu Thr Val Ile	145	150	155
Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr Leu Leu Leu	165	170	175
Ile Gln Leu Leu Phe Cys Asn His Asn Thr Leu Pro His Phe Phe Cys	180	185	190
Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr Leu Ile Asn	195	200	205
Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile Phe Pro Phe	210	215	220
Thr Leu Ser Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala Val Leu Arg	225	230	235
Val Ser Ser Thr Gln Gly Lys Trp Lys Ala Phe Ser Thr Cys Gly Ser	245	250	255
His Leu Thr Val Val Leu Leu Phe Tyr Gly Thr Ile Val Gly Val Tyr	260	265	270
Phe Phe Pro Ser Ser Thr His Pro Glu Asp Thr Asp Lys Ile Gly Ala	275	280	285
Val Leu Phe Thr Val Val Thr Pro Met Ile Asn Pro Phe Ile Tyr Ser	290	295	300
Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Arg Lys Leu Ile Asn Arg	305	310	315
Lys Ile Ser Ser Leu	325		

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<211> 978

<212> DNA

<213> Homo sapiens

<400> 2

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tttgtgcttt tcttgggtat gtacctggtc actgtgattg ggaacgggct catcattgtg 180
gctatcagct tggatacgta ccttcatacc cccatgtatc tcttccttgc caatctatcc 240
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caccctctga attatacaat tctcatgcgg ccaggttcg gcattttgct cacagtcac 480
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<210> 3
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 <213> Homo sapiens

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      20             25             30

Phe Leu Leu Met Tyr Val Ile Thr Val Val Gly Asn Leu Gly Met Ile
      35             40             45

Ile Ile Ile Lys Ile Asn Pro Lys Phe His Thr Pro Met Tyr Phe Phe
      50             55             60

Leu Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Val Thr
      65             70             75             80

Pro Lys Leu Leu Glu Asn Leu Val Met Ala Asp Lys Ser Ile Phe Tyr
      85             90             95

Phe Ser Cys Met Met Gln Tyr Phe Leu Ser Cys Thr Ala Val Val Thr
      100            105            110

Glu Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile
      115            120            125

Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Arg Leu Cys Ala
      130            135            140

Leu Leu Val Ala Gly Ser Tyr Leu Trp Gly Met Phe Gly Pro Leu Val
      145            150            155            160

Leu Leu Cys Tyr Ala Leu Arg Leu Asn Phe Ser Gly Pro Asn Val Ile
      165            170            175

Asn His Phe Phe Cys Glu Tyr Thr Ala Leu Ile Ser Val Ser Gly Ser
      180            185            190

Asp Ile Leu Ile Pro His Leu Leu Leu Phe Ser Phe Ala Thr Phe Asn
      195            200            205

Glu Met Cys Thr Leu Leu Ile Ile Leu Thr Ser Tyr Val Phe Ile Phe
      210            215            220

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Val Thr Val Leu Lys Ile Arg Ser Val Ser Gly Arg His Lys Ala Phe
 225 230 235 240
 Ser Thr Trp Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
 245 250 255
 Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg Gln Thr
 260 265 270
 Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Asn Pro Met Leu Asn
 275 280 285
 Pro Pro Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Trp
 290 295 300
 Lys Leu Ile His Thr Gln Val Pro Phe His
 305 310

<210> 4
 <211> 945
 <212> DNA
 <213> Homo sapiens

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 gcctatgacc gctttgtggc catctgcaat cctctgcttt atacagtggc catgtcacag 420
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 ctcctttgtt atgtctctcg gttaaaacttc tctggaccta atgtaatcaa ccacttcttt 540
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<210> 5
 <211> 313
 <212> PRT
 <213> Homo sapiens

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 Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val
 35 40 45
 Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
 65 70 75 80
 Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu
 85 90 95
 Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu
 100 105 110
 Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
 115 120 125
 Asn Pro Leu Leu Tyr Thr Val Asp Met Ser Gln Lys Leu Cys Val Leu
 130 135 140
 Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu
 145 150 155 160
 Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn
 165 170 175
 His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp
 180 185 190
 Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu
 195 200 205
 Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val
 210 215 220
 Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile
 245 250 255
 Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val
 260 265 270
 Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 275 280 285
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
 290 295 300
 Ile Leu Asp Thr Lys Val Phe Ser Tyr
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<210> 6
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 <212> DNA
 <213> Homo sapiens

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<210> 7

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<212> PRT

<213> Homo sapiens

<400> 7

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Glu Asn Leu Glu Leu Trp Lys Ile Phe Ser Ala Val Phe Leu Val Met
      20                      25                      30

Tyr Val Ala Thr Val Leu Glu Asn Leu Leu Ile Val Val Thr Ile Ile
      35                      40                      45

Thr Ser Gln Ser Leu Arg Ser Pro Met Tyr Phe Phe Leu Thr Phe Leu
      50                      55                      60

Ser Leu Leu Asp Val Met Phe Ser Ser Val Val Ala Pro Lys Val Ile
      65                      70                      75                      80

Val Asp Thr Leu Ser Lys Ser Thr Thr Ile Ser Leu Lys Gly Cys Leu
      85                      90                      95

Thr Gln Leu Phe Val Glu His Phe Phe Gly Gly Val Gly Ile Ile Leu
      100                      105                      110

Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
      115                      120                      125

His Tyr Thr Ile Ile Met Ser Pro Arg Val Cys Cys Leu Met Val Gly
      130                      135                      140

Gly Ala Trp Val Gly Gly Phe Met His Ala Met Ile Gln Leu Leu Phe
      145                      150                      155                      160

Met Tyr Gln Ile Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Ile
      165                      170                      175

Cys Asp Leu Phe Gln Leu Leu Thr Leu Ala Cys Thr Asp Thr His Ile
      180                      185                      190

Leu Gly Leu Leu Val Thr Leu Asn Ser Gly Met Met Cys Val Ala Ile
      195                      200                      205

Phe Leu Ile Leu Ile Ala Ser Tyr Thr Val Ile Leu Cys Ser Leu Lys
      210                      215                      220

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Ser Tyr Ser Ser Lys Gly Arg His Lys Ala Leu Ser Thr Cys Ser Ser
225 230 235 240

His Leu Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Phe Leu Tyr
245 250 255

Met Arg Pro Val Val Thr His Pro Ile Asp Lys Ala Met Ala Val Ser
260 265 270

Asp Ser Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
275 280 285

Asn Ala Glu Val Lys Ser Ala Met Lys Lys Leu Trp Met Lys Trp Glu
290 295 300

Ala Leu Ala Gly Lys
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<212> DNA
<213> Homo sapiens

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ctacttattg tggtaactat tatcacaagt cagagtctga ggtcacctat gtattttttt 180
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<210> 9
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<212> PRT
<213> Homo sapiens

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Leu Ile Tyr Gly Val Thr Leu Leu Ala Asn Leu Gly Met Ile Ala Leu
35 40 45
Ile Gln Val Ser Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

His Leu Ser Ser Val Asp Phe Cys Tyr Ser Ser Ile Ile Val Pro Lys
 65 70 75 80
 Met Leu Ala Asn Ile Phe Asn Lys Asp Lys Ala Ile Ser Phe Leu Gly
 85 90 95
 Cys Met Val Gln Phe Tyr Leu Phe Cys Thr Cys Val Val Thr Glu Val
 100 105 110
 Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Leu Tyr Thr Val Thr Met Ser Trp Lys Val Arg Val Glu Leu
 130 135 140
 Ala Ser Cys Cys Tyr Phe Cys Gly Thr Val Cys Ser Leu Ile His Leu
 145 150 155 160
 Cys Leu Ala Leu Arg Ile Pro Phe Tyr Arg Ser Asn Val Ile Asn His
 165 170 175
 Phe Phe Cys Asp Leu Pro Pro Val Leu Ser Leu Ala Cys Ser Asp Ile
 180 185 190
 Thr Val Asn Glu Thr Leu Leu Phe Leu Val Ala Thr Leu Asn Glu Ser
 195 200 205
 Val Thr Ile Met Ile Ile Leu Thr Ser Tyr Leu Leu Ile Leu Thr Thr
 210 215 220
 Ile Leu Lys Met Gly Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Ala Ile Thr Val Phe His Gly Thr Val Leu
 245 250 255
 Ser Ile Tyr Cys Arg Pro Ser Ser Gly Asn Ser Gly Asp Ala Asp Lys
 260 265 270
 Val Ala Thr Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Ser Val
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Arg Lys Val
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 Met Gly Ser Lys Ile His Ser
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 <212> DNA
 <213> Homo sapiens

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<210> 11
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35 40 45
Ile Ile Ile Arg Leu Asn Ser Lys Leu His Thr Ile Met Tyr Phe Phe
50 55 60
Leu Ser His Leu Ser Leu Thr Asp Phe Cys Phe Ser Thr Val Val Thr
65 70 75 80
Pro Lys Leu Leu Glu Asn Leu Val Val Glu Tyr Arg Thr Ile Ser Phe
85 90 95
Ser Gly Cys Ile Met Gln Phe Cys Phe Ala Cys Ile Phe Gly Val Thr
100 105 110
Glu Thr Phe Met Leu Ala Ala Met Ala Tyr Asp Arg Phe Val Ala Val
115 120 125
Cys Lys Pro Leu Leu Tyr Thr Thr Ile Met Ser Gln Lys Leu Cys Ala
130 135 140
Leu Leu Val Ala Gly Ser Tyr Thr Trp Gly Ile Val Cys Ser Leu Ile
145 150 155 160
Leu Thr Tyr Phe Leu Leu Asp Leu Ser Phe Cys Glu Ser Thr Phe Ile
165 170 175
Asn Asn Phe Ile Cys Asp His Ser Val Ile Val Ser Ala Ser Tyr Ser
180 185 190
Asp Pro Tyr Ile Ser Gln Arg Leu Cys Phe Ile Ile Ala Ile Phe Asn
195 200 205
Glu Val Ser Ser Leu Ile Ile Ile Leu Thr Ser Tyr Met Leu Ile Phe
210 215 220
Thr Thr Ile Met Lys Met Arg Ser Ala Ser Gly Arg Gln Lys Thr Phe

65	70	75	80
Leu Ile Ile Pro Ala Ile Tyr Ser Asp Pro Arg Leu His Thr Pro Met	85	90	95
Tyr Phe Phe Leu Ser Asn Leu Ser Phe Met Asp Ile Cys Phe Thr Thr	100	105	110
Val Ile Val Pro Lys Met Leu Val Asn Phe Leu Ser Glu Thr Lys Val	115	120	125
Ile Ser Tyr Val Gly Cys Leu Ala Gln Met Tyr Phe Phe Met Ala Phe	130	135	140
Gly Asn Thr Asp Ser Tyr Leu Leu Ala Ser Met Ala Ile Asp Arg Leu	145	150	155
Val Ala Ile Cys Asn Pro Leu His Tyr Asp Val Val Met Lys Pro Arg	165	170	175
His Cys Leu Leu Met Leu Leu Gly Ser Cys Ser Ile Ser His Leu His	180	185	190
Ser Leu Phe Arg Val Leu Leu Met Ser Arg Leu Ser Phe Cys Ala Ser	195	200	205
His Ile Ile Lys His Phe Phe Cys Asp Thr Gln Pro Val Leu Lys Leu	210	215	220
Ser Cys Ser Asp Thr Ser Ser Ser Gln Met Val Val Met Thr Glu Thr	225	230	235
Leu Ala Val Ile Val Thr Pro Phe Leu Cys Ile Ile Phe Ser Tyr Leu	245	250	255
Arg Ile Met Val Thr Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Trp	260	265	270
Lys Ala Phe Ser Thr Cys Gly Ser His Leu Thr Ala Val Ala Leu Phe	275	280	285
Tyr Gly Ser Ile Ile Tyr Val Tyr Phe Arg Pro Leu Ser Met Tyr Ser	290	295	300
Val Val Arg Asp Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro	305	310	315
Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Arg	325	330	335
Gly Leu Lys Lys Leu Gln Asp Arg Ile Tyr Arg	340	345	

<210> 14
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 <212> DNA
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<210> 15
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 <213> Homo sapiens

<400> 15

Met	Ala	Thr	Ser	Asn	His	Ser	Ser	Gly	Ala	Glu	Phe	Ile	Leu	Ala	Gly
1				5				10						15	
Leu	Thr	Gln	Arg	Pro	Glu	Leu	Gln	Leu	Pro	Leu	Phe	Leu	Leu	Phe	Leu
			20					25					30		
Gly	Ile	Tyr	Val	Val	Thr	Val	Val	Gly	Asn	Leu	Gly	Met	Ile	Phe	Leu
			35				40					45			
Ile	Ala	Leu	Ser	Ser	Gln	Leu	Tyr	Pro	Pro	Val	Tyr	Tyr	Phe	Leu	Ser
		50				55					60				
His	Leu	Ser	Phe	Ile	Asp	Leu	Cys	Tyr	Ser	Ser	Val	Ile	Thr	Pro	Lys
	65				70					75					80
Met	Leu	Val	Asn	Phe	Val	Pro	Glu	Glu	Asn	Ile	Ile	Ser	Phe	Leu	Glu
				85					90					95	
Cys	Ile	Thr	Gln	Leu	Tyr	Phe	Phe	Leu	Ile	Phe	Val	Ile	Ala	Glu	Gly
			100					105					110		
Tyr	Leu	Leu	Thr	Ala	Met	Glu	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Arg
		115				120						125			
Pro	Leu	Leu	Tyr	Asn	Ile	Val	Met	Ser	His	Arg	Val	Cys	Ser	Ile	Met
		130				135						140			
Met	Ala	Val	Val	Tyr	Ser	Leu	Gly	Phe	Leu	Trp	Ala	Thr	Val	His	Thr
	145				150					155				160	
Thr	Arg	Met	Ser	Val	Leu	Ser	Phe	Cys	Arg	Ser	His	Thr	Val	Ser	His
				165					170					175	
Tyr	Phe	Cys	Asp	Ile	Leu	Pro	Leu	Leu	Thr	Leu	Ser	Cys	Ser	Ser	Thr
			180				185						190		

His Ile Asn Glu Ile Leu Leu Phe Ile Ile Gly Gly Val Asn Thr Leu
 195 200 205
 Ala Thr Thr Leu Ala Val Leu Ile Ser Tyr Ala Phe Ile Phe Ser Ser
 210 215 220
 Ile Leu Gly Ile His Ser Thr Glu Gly Gln Ser Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Ser Ser His Leu Leu Ala Val Gly Ile Phe Phe Gly Ser Ile Thr
 245 250 255
 Phe Met Tyr Phe Lys Pro Pro Ser Ser Thr Thr Met Glu Lys Glu Lys
 260 265 270
 Val Ser Ser Val Phe Tyr Ile Thr Ile Ile Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asn Ala Leu Lys Lys Met
 290 295 300
 Thr Arg Gly Arg Gln Ser Ser
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<210> 16
 <211> 936
 <212> DNA
 <213> Homo sapiens

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 gggaacctgg gcatgatctt cttaattgct ctcagttctc aactttaccc tccagtgtat 180
 tattttctca gtcatttgct tttcattgat ctctgctact cctctgtcat tacccttaag 240
 atgctgggtga actttgttcc agaggagaac attatctcct ttctggaatg cattactcaa 300
 ctttatttct tccttatttt tgtaattgca gaaggctacc ttctgacagc catggaatat 360
 gaccgttatg ttgctatctg tcgcccactg ctttacaata ttgtcatgtc ccacaggggc 420
 tgttccataa tgatggctgt ggtataactca ctgggttttc tgtgggccac agtccatact 480
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 attctccctt tattgactct gtcttgctcc agcaccaca tcaatgagat tctgtgttgc 600
 attattggag gagttaatac cttagcaact acactggcgg tccttatctc ttatgctttc 660
 attttctcta gtatccttgg tattcattcc actgaggggc aatccaaagc ctttggcact 720
 tgtagctccc atctcttggc tgtgggcac ttttttgggt ctataacatt catgtatttc 780
 aagccccctt ccagcactac tatggaaaaa gagaagggtg cttctgtgtt ctacatcaca 840
 ataatcccca tgctgaatcc tctaacttat agcctgagga acaaggatgt gaaaaatgca 900
 ctgaagaaga tgactagggg aaggcagtc tctga 936

<210> 17
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 17
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 Leu Thr Asp Arg Pro Glu Phe Trp Gln Pro Phe Phe Phe Leu Phe Leu
 20 25 30

Val Ile Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Thr Leu
 35 40 45
 Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
 50 55 60
 Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
 65 70 75 80
 Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Asn Val Gly
 85 90 95
 Cys Met Thr Arg Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys
 100 105 110
 Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu
 130 135 140
 Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr
 145 150 155 160
 Gly Cys Met Phe Arg Leu Thr Phe Cys Ser Ala Asn Ile Ile Asn His
 165 170 175
 Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
 180 185 190
 Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Thr Asn Ile Thr
 195 200 205
 Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser
 210 215 220
 Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala
 245 250 255
 Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
 260 265 270
 Phe Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
 290 295 300
 Ile Lys Ile Gln Arg Arg Asn Ile Phe
 305 310

<210> 18
 <211> 942
 <212> DNA
 <213> Homo sapiens

<400> 18

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ggcaacccttg gcttgatcac tcttttcggt ctaaattctc acctccacac accaatgtac 180
tatttctctt tcaatctctc cttcattgat ctctgttact cctctgtttt cactcccaaa 240
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ctgtttttct ttctcttttt cgtcatctct gaatgttaca tgttgacctc aatggcatat 360
gatcgctatg tggccatctg taatccattg ctgtataagg tcaccatgtc ccatcagggtc 420
tgttctatgc tcaacttttg tgcttacata atgggattgg ctggagccac ggcccacacc 480
gggtgcatgt ttagactcac cttctgcagt gctaatatca ttaaccatta cttgtgtgac 540
atactcccc tctccagct ttcctgcacc agcacctatg tcaacgaggt ggttgttctc 600
attgttgtgg gtactaatat cacggtaccc agttgtacca tcctcatttc ttatgttttc 660
attgtcacta gcattcttca tatcaaacc actcaaggaa gatcaaaagc cttcagtact 720
tgtagctctc atgtcattgc tctgtctctg ttttttgggt cagcggcatt catgtatatt 780
aaatattctt ctggatctat ggagcaggga aaagttttt ctgttttcta cactaatgtg 840
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<210> 19
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 19
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 20 25 30
 Val Ile Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Ile Leu
 35 40 45
 Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
 50 55 60
 Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
 65 70 75 80
 Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Tyr Val Gly
 85 90 95
 Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys
 100 105 110
 Tyr Ile Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu
 130 135 140
 Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr
 145 150 155 160
 Gly Cys Met Leu Arg Leu Thr Phe Cys Ser Ala Asn Ile Ile Asn His
 165 170 175
 Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
 180 185 190
 Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile Asn Ile Met

195 200 205
 Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser
 210 215 220
 Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala
 245 250 255
 Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
 260 265 270
 Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
 290 295 300
 Ile Lys Ile Gln Arg Arg Asn Ile Phe
 305 310

<210> 20
 <211> 942
 <212> DNA
 <213> Homo sapiens

<400> 20
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 ggcaaccctt gcttgatcat tcttttcggt ctaaattctc acctccacac accaatgtac 180
 tatttcctct tcaatctctc cttcattgat ctctgttact cctctgtttt cactcccaa 240
 atgctaata gaactttgtatc aaaaaagaat attatctcct atgttgggtg catgactcag 300
 ctgtttttct ttctcttttt tgtcatctct gaatgctaca tattgacctc aatggcatat 360
 gatcgctatg tggccatctg taatccattg ctgtataagg tcaccatgtc ccatcaggtc 420
 tgttctatgc tcacttttgc tgcttacata atgggattgg ctggagccac ggcccacacc 480
 ggggtgcatg ttagactcac cttctgcagt gctaatatca tcaaccatta cttgtgtgac 540
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 aaatattctt ctggatctat ggagcaggga aaagtttctt ctgttttcta cactaatgtg 840
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 aggaaagctc tgattaaaat tcagagaaga aatatattct aa 942

<210> 21
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 21
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 Leu Ser Glu Gln Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
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 Gly Ile Tyr Val Phe Thr Val Val Gly Asn Leu Gly Leu Ile Thr Leu

35					40					45						
Ile	Gly	Ile	Asn	Pro	Ser	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Phe	
50					55					60						
Asn	Leu	Ser	Phe	Ile	Asp	Leu	Cys	Tyr	Ser	Cys	Val	Phe	Thr	Pro	Lys	
65					70					75					80	
Met	Leu	Asn	Asp	Phe	Val	Ser	Glu	Ser	Ile	Ile	Ser	Tyr	Val	Gly	Cys	
85					90					95						
Met	Thr	Gln	Leu	Phe	Phe	Phe	Cys	Phe	Phe	Val	Asn	Ser	Glu	Cys	Tyr	
100					105					110						
Val	Leu	Val	Ser	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	Pro	
115					120					125						
Leu	Leu	Tyr	Met	Val	Thr	Met	Ser	Pro	Arg	Val	Cys	Phe	Leu	Leu	Met	
130					135					140						
Phe	Gly	Ser	Tyr	Val	Val	Gly	Phe	Ala	Gly	Ala	Met	Ala	His	Thr	Gly	
145					150					155					160	
Ser	Met	Leu	Arg	Leu	Thr	Phe	Cys	Asp	Ser	Asn	Val	Ile	Asp	His	Tyr	
165					170					175						
Leu	Cys	Asp	Val	Leu	Pro	Leu	Leu	Gln	Leu	Ser	Cys	Thr	Ser	Thr	His	
180					185					190						
Val	Ser	Glu	Leu	Val	Phe	Phe	Ile	Val	Val	Gly	Val	Ile	Thr	Met	Leu	
195					200					205						
Ser	Ser	Ile	Ser	Ile	Val	Ile	Ser	Tyr	Ala	Leu	Ile	Leu	Ser	Asn	Ile	
210					215					220						
Leu	Cys	Ile	Pro	Ser	Ala	Glu	Gly	Arg	Ser	Lys	Ala	Phe	Ser	Thr	Trp	
225					230					235					240	
Gly	Ser	His	Ile	Ile	Ala	Val	Ala	Leu	Phe	Phe	Gly	Ser	Gly	Thr	Phe	
245					250					255						
Thr	Tyr	Leu	Thr	Thr	Ser	Phe	Pro	Gly	Ser	Met	Asn	His	Gly	Arg	Phe	
260					265					270						
Ala	Ser	Val	Phe	Tyr	Thr	Asn	Val	Val	Pro	Met	Leu	Asn	Pro	Ser	Ile	
275					280					285						
Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Asp	Lys	Leu	Ala	Leu	Gly	Lys	Thr	Leu	
290					295					300						
Lys	Arg	Val	Leu	Phe												
305																

<210> 22

<211> 930

<212> DNA

<213> Homo sapiens

<400> 22

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ggcaacttgg gcttgatcac cttaattggg ataaatccta gccttcacac ccccatgtac 180
tttttcctct tcaacttgtc ctttatagat ctctgttatt cctgtgtgtt tcccccaaa 240
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tttttcctct gtttctttgt caattctgag tgctatgtgt tggatatcaat ggcctatgat 360
cgctatgtgg ccatctgcaa cccctgtctc tacatgggtca ccatgtcccc aagggctctgc 420
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acatcttttc ctggctctat gaaccatggc agatttgcc t agtctttta caccaatgtg 840
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<210> 23

<211> 360

<212> PRT

<213> Homo sapiens

<400> 23

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Met Glu Arg Asn His Asn Pro Asp Asn Cys Asn Val Leu Asn Phe Phe
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Phe Ala Asp Lys Lys Asn Lys Arg Arg Asn Phe Gly Gln Ile Val Ser
          20              25              30

Asp Val Gly Arg Ile Cys Tyr Ser Val Ser Leu Ser Leu Gly Glu Pro
          35              40              45

Thr Thr Met Gly Arg Asn Asn Leu Thr Arg Pro Ser Glu Phe Ile Leu
          50              55              60

Leu Gly Leu Ser Ser Arg Pro Glu Asp Gln Lys Pro Leu Phe Ala Val
          65              70              75              80

Phe Leu Pro Ile Tyr Leu Ile Thr Val Ile Gly Asn Leu Leu Ile Ile
          85              90              95

Leu Ala Ile Arg Ser Asp Thr Arg Leu Gln Thr Pro Met Tyr Phe Phe
          100             105             110

Leu Ser Ile Leu Ser Phe Val Asp Ile Cys Tyr Val Thr Val Ile Ile
          115             120             125

Pro Lys Met Leu Val Asn Phe Leu Ser Glu Thr Lys Thr Ile Ser Tyr
          130             135             140

Gly Glu Cys Leu Thr Gln Met Tyr Phe Phe Leu Ala Phe Gly Asn Thr
          145             150             155             160

Asp Ser Tyr Leu Leu Ala Ala Met Ala Ile Asp Arg Tyr Val Ala Ile
          165             170             175

Cys Asn Pro Phe His Tyr Ile Thr Ile Met Ser His Arg Cys Cys Val
          180             185             190

Leu Leu Leu Val Leu Ser Phe Cys Ile Pro His Phe His Ser Leu Leu
          195             200             205

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His Ile Leu Leu Thr Asn Gln Leu Ile Phe Cys Ala Ser Asn Val Ile
 210 215 220
 His His Phe Phe Cys Asp Asp Gln Pro Val Leu Lys Leu Ser Cys Ser
 225 230 235 240
 Ser His Phe Val Lys Glu Ile Thr Val Met Thr Glu Gly Leu Ala Val
 245 250 255
 Ile Met Thr Pro Phe Ser Cys Ile Ile Ile Ser Tyr Leu Arg Ile Leu
 260 265 270
 Ile Thr Val Leu Lys Ile Pro Ser Ala Ala Gly Lys Arg Lys Ala Phe
 275 280 285
 Ser Thr Cys Gly Ser His Leu Thr Val Val Thr Leu Phe Tyr Gly Ser
 290 295 300
 Ile Ser Tyr Val Tyr Phe Gln Pro Leu Ser Asn Tyr Thr Val Lys Asp
 305 310 315 320
 Gln Ile Ala Thr Ile Ile Tyr Thr Val Leu Thr Pro Met Leu Asn Pro
 325 330 335
 Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Gln Gly Leu Ala Lys
 340 345 350
 Leu Met His Arg Met Lys Cys Gln
 355 360

<210> 24
 <211> 1083
 <212> DNA
 <213> Homo sapiens

<400> 24
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 gttagtttat ctttaggtga accacaact atgggaagaa ataacctaac aagaccctct 180
 gaattcatcc tccttggtact ctctctctga cctgaggatc agaagccgct ctttgctgtg 240
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 tcagacactc gtctccagac gcccatgtac ttctttctaa gcatcctgtc ttttggtgac 360
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 accatctctt acggtgagtg tctgacctag atgtactttt tcttagcctt tggaaacaca 480
 gacagttacc tgctagcagc catggccatt gaccgctatg tggccatatg taatcccttc 540
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 caaatagcaa caattatcta caccgtactg actcctatgc taaatccatt tatctatagt 1020
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<210> 25
 <211> 312

<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (273)
<223> Any amino acid

<400> 25

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Phe	Ser	Asp	Arg	Pro	Gln	Leu	Glu	Leu	Val	Leu	Phe	Val	Val	Leu	Leu	
			20					25					30			
Ile	Phe	Tyr	Ile	Phe	Thr	Leu	Leu	Gly	Asn	Lys	Thr	Ile	Ile	Val	Leu	
		35					40					45				
Ser	His	Leu	Asp	Pro	His	Leu	His	Asn	Pro	Met	Tyr	Phe	Phe	Phe	Ser	
	50					55					60					
Asn	Leu	Ser	Phe	Leu	Asp	Leu	Cys	Tyr	Thr	Thr	Gly	Ile	Val	Pro	Gln	
65					70					75					80	
Leu	Leu	Val	Asn	Leu	Arg	Gly	Ala	Asp	Lys	Ser	Ile	Ser	Tyr	Gly	Gly	
				85					90					95		
Cys	Val	Val	Gln	Leu	Tyr	Ile	Ser	Leu	Gly	Leu	Gly	Ser	Thr	Glu	Cys	
			100					105					110			
Val	Leu	Leu	Gly	Val	Met	Ala	Phe	Asp	Arg	Tyr	Ala	Ala	Val	Cys	Arg	
	115						120					125				
Pro	Leu	His	Tyr	Thr	Val	Val	Met	His	Pro	Cys	Leu	Tyr	Val	Leu	Met	
	130					135					140					
Ala	Ser	Thr	Ser	Trp	Val	Ile	Gly	Phe	Ala	Asn	Ser	Leu	Leu	Gln	Thr	
145					150					155					160	
Val	Leu	Ile	Leu	Leu	Leu	Thr	Leu	Cys	Gly	Arg	Asn	Lys	Leu	Glu	His	
			165						170					175		
Phe	Leu	Cys	Glu	Val	Pro	Pro	Leu	Leu	Lys	Leu	Ala	Cys	Val	Asp	Thr	
			180					185					190			
Thr	Met	Asn	Glu	Ser	Glu	Leu	Phe	Phe	Val	Ser	Val	Ile	Ile	Leu	Leu	
		195					200					205				
Val	Pro	Val	Ala	Leu	Ile	Ile	Phe	Ser	Tyr	Ser	Gln	Ile	Val	Arg	Ala	
	210					215					220					
Val	Val	Arg	Ile	Lys	Ser	Ala	Thr	Gly	Gln	Arg	Lys	Val	Phe	Gly	Thr	
225					230					235					240	
Cys	Gly	Ser	His	Leu	Thr	Val	Val	Ser	Leu	Phe	Tyr	Gly	Thr	Ala	Ile	
				245					250					255		
Tyr	Ala	Tyr	Leu	Gln	Pro	Gly	Asn	Asn	Tyr	Ser	Gln	Asp	Gln	Gly	Lys	
			260					265					270			
Xaa	Ile	Ser	Leu	Phe	Tyr	Thr	Ile	Ile	Thr	Pro	Met	Ile	Asn	Pro	Leu	

275

280

285

Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Lys Val
 290 295 300

Leu Trp Lys Asn Tyr Asp Ser Arg
 305 310

<210> 26

<211> 939

<212> DNA

<213> Homo sapiens

<400> 26

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tttttcttct ccaacctaaag ctttttggat ctgtgttaca caaccggcat tgttccacag 240
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tatgtgctga tggcttctac ttcatgggtc attgggtttg ccaactccct attgcagacg 480
gtgctcatct tgcttttaac actttgtgga agaaataaat tagaacactt tctttgtgag 540
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attgtcaggg cagtcgtgag gataaagtca gcaacagggc agagaaaagt gtttgggaca 720
tgtggctccc acctcacagt ggtttccctg ttctacggca cagctatcta tgcttacctc 780
cagcccggca acaactactc tcaggatcag ggcaagktca tctctctctt ctacaccatc 840
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<210> 27

<211> 341

<212> PRT

<213> Homo sapiens

<400> 27

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Met Ala Leu Pro Leu Leu Ser Pro Ser Cys Phe Ala Ser Ser Gln
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Ser Leu Ser Ser Arg Met Asn Ser Glu Asn Leu Thr Arg Ala Ala Val
  20 25 30
Ala Pro Ala Glu Phe Val Leu Leu Gly Ile Thr Asn Arg Trp Asp Leu
  35 40 45
Arg Val Ala Leu Phe Leu Thr Cys Leu Pro Val Tyr Leu Val Ser Leu
  50 55 60
Leu Gly Asn Met Gly Met Ala Leu Leu Ile Arg Met Asp Ala Arg Leu
  65 70 75 80
His Thr Pro Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Asp Ala
  85 90 95
Cys Tyr Ser Ser Ala Ile Gly Pro Lys Met Leu Val Asp Leu Leu Leu
  100 105 110
Pro Arg Ala Thr Ile Pro Tyr Thr Ala Cys Ala Leu Gln Met Phe Val

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115					120					125									
Phe	Ala	Gly	Leu	Ala	Asp	Thr	Glu	Cys	Cys	Leu	Leu	Ala	Ala	Met	Ala				
130					135					140									
Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Arg	Asn	Pro	Leu	Leu	Tyr	Thr	Thr	Ala				
145					150					155					160				
Met	Ser	Gln	Arg	Leu	Cys	Leu	Ala	Leu	Leu	Gly	Ala	Ser	Gly	Leu	Gly				
165					170					175									
Gly	Ala	Val	Ser	Ala	Phe	Val	His	Thr	Thr	Leu	Thr	Phe	Arg	Leu	Ser				
180					185					190									
Phe	Cys	Arg	Ser	Arg	Lys	Ile	Asn	Ser	Phe	Phe	Cys	Asp	Ile	Pro	Pro				
195					200					205									
Leu	Leu	Ala	Ile	Ser	Cys	Ser	Asp	Thr	Ser	Leu	Asn	Glu	Leu	Leu	Leu				
210					215					220									
Phe	Ala	Ile	Cys	Gly	Phe	Ile	Gln	Thr	Ala	Thr	Val	Leu	Ala	Ile	Thr				
225					230					235					240				
Val	Ser	Tyr	Gly	Phe	Ile	Ala	Gly	Ala	Val	Ile	His	Met	Arg	Ser	Val				
245					250					255									
Glu	Gly	Ser	Arg	Arg	Ala	Ala	Ser	Thr	Gly	Gly	Ser	His	Leu	Thr	Ala				
260					265					270									
Val	Ala	Met	Met	Tyr	Gly	Thr	Leu	Ile	Phe	Met	Tyr	Leu	Arg	Pro	Ser				
275					280					285									
Ser	Ser	Tyr	Ala	Leu	Asp	Thr	Asp	Lys	Met	Ala	Ser	Val	Phe	Tyr	Thr				
290					295					300									
Leu	Val	Ile	Pro	Ser	Leu	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys				
305					310					315					320				
Glu	Val	Lys	Glu	Ala	Leu	Arg	Gln	Thr	Trp	Ser	Arg	Phe	His	Cys	Pro				
325					330					335									
Gly	Gln	Gly	Ser	Gln															
340																			

<210> 28
 <211> 1026
 <212> DNA
 <213> Homo sapiens

<400> 28
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 ggcatacaca atcgctggga cctgcgtgtg gccctcttcc tgacctgcct gcctgtctac 180
 ctggtgagcc tgctgggaaa catgggcatg gcgctgctga tccgcatgga tgcccggctc 240
 cacacaccta tgtacttctt cctggccaac ctctccctgc tggatgcctg ctattcctcc 300
 gccatcggcc ccaagatgct agtggacctg ctgctgcccc gagccaccat cccttacaca 360
 gcctgtgccc tccagatggt tgtctttgca ggtctggctg atactgagtg ttgcttgctg 420
 gcagccatgg cctatgaccg ctacgtggcc atcagaaacc cacttctcta tacaacagct 480
 atgtcgcagc gtctatgcct ggccttgctg ggagcatcag gcctgggtgg ggcagtgagt 540
 gcctttgttc acacaacctt caccctccgc ctgagcttct gccgctcccg gaagatcaat 600

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gtgtcttatg gcttcacgcg tggggctgtg atccacatgc gctcgggtcga gggcagtcgg 780
cgagcagcct ccaccggtgg ttcccacctc acagccgtgg ccatgatgta cgggacactc 840
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gtgttctata ccttgggtcat cccgtctctc aaccactca tctacagcct ccgcaataag 960
gaggtcaagg aggcctcag gcagacctgg agccgattcc actgtccagg gcaggggtcc 1020
cagtga 1026

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<210> 29
 <211> 309
 <212> PRT
 <213> Homo sapiens

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<400> 29
Met Arg Glu Asn Asn Gln Ser Ser Thr Leu Glu Phe Ile Leu Leu Gly
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Val Thr Gly Gln Gln Glu Gln Glu Asp Phe Phe Tyr Ile Leu Phe Leu
          20              25              30

Phe Ile Tyr Pro Ile Thr Leu Ile Gly Asn Leu Leu Ile Val Leu Ala
  35              40              45

Ile Cys Ser Asp Val Arg Leu His Asn Pro Met Tyr Phe Leu Leu Ala
  50              55              60

Asn Leu Ser Leu Val Asp Ile Phe Phe Ser Ser Val Thr Ile Pro Lys
  65              70              75              80

Met Leu Ala Asn His Leu Leu Gly Ser Lys Ser Ile Ser Phe Gly Gly
          85              90              95

Cys Leu Thr Gln Met Tyr Phe Met Ile Ala Leu Gly Asn Thr Asp Ser
  100              105              110

Tyr Ile Leu Ala Ala Met Ala Tyr Asp Arg Ala Val Ala Ile Ser His
  115              120              125

Pro Leu His Tyr Thr Thr Ile Met Ser Pro Arg Ser Cys Ile Trp Leu
  130              135              140

Ile Ala Gly Ser Trp Val Ile Gly Asn Ala Asn Ala Leu Pro His Thr
  145              150              155              160

Leu Leu Thr Ala Ser Leu Ser Phe Cys Gly Asn Gln Glu Val Ala Asn
          165              170              175

Phe Tyr Cys Asp Ile Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Ile
          180              185              190

His Phe His Val Lys Met Met Tyr Leu Gly Val Gly Ile Phe Ser Val
  195              200              205

Pro Leu Leu Cys Ile Ile Val Ser Tyr Ile Arg Val Phe Ser Thr Val
  210              215              220

Phe Gln Val Pro Ser Thr Lys Gly Val Leu Lys Ala Phe Ser Thr Cys
  225              230              235              240

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Gly Ser His Leu Thr Val Val Ser Leu Tyr Tyr Gly Thr Val Met Gly
245 250 255

Thr Tyr Phe Arg Pro Leu Thr Asn Tyr Ser Leu Lys Asp Ala Val Ile
260 265 270

Thr Val Met Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Arg Asp Met Lys Ala Ala Leu Arg Lys Leu Phe Asn
290 295 300

Lys Arg Ile Ser Ser
305

<210> 30
<211> 930
<212> DNA
<213> Homo sapiens

<400> 30
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caggaacagg aagatttctt ctacatctct ttcctgttca ttaccctcat cacattgatt 120
ggaaacctgc tcattgtctt agccatttgc tctgatgttc gccttcacaa ccccatgtat 180
tttctccttg ccaacctctc cttggttgac atcttcttct catcggtaac catccctaag 240
atgctggcca accatctctt gggcagcaaa tccatctctt ttgggggatg cctaacgcag 300
atgtatttca tgatagcctt gggtaacaca gacagctata ttttggctgc aatggcatat 360
gatcgagctg tggccatcag ccaccactt cactacacaa caattatgag tccacggctt 420
tgtatctggc ttattgctgg gtcttgggtg attggaaatg ccaatgcctt cccccacact 480
ctgctcacag ctagtctgtc cttctgtggc aaccaggaag tggccaactt ctactgtgac 540
attacccctt tgctgaagtt atcctgttct gacatccact ttcattgtgaa gatgatgtac 600
ctaggggttg gcattttctc tgtgccatta ctatgcata ttgtctccta tattcgagtc 660
ttctccacag tcttccagggt tcttccacc aagggcgtgc tcaaggcctt ctccacctgt 720
ggttccacc tcacggttgt ctctttgtat tatggtagac tcatgggcac gtatttccgc 780
cctttgacca attatagcct aaaagacgca gtgatcactg taatgtacac ggcagtgacc 840
ccaatgttaa atcctttcat ctacagtctg agaaatcggg acatgaaggc tgccctgcgg 900
aaactcttca acaagagaat ctcctcgtaa 930

<210> 31
<211> 311
<212> PRT
<213> Homo sapiens

<400> 31
Met Arg Arg Asn Cys Thr Leu Val Thr Glu Phe Ile Leu Leu Gly Leu
1 5 10 15
Thr Ser Arg Arg Glu Leu Gln Ile Leu Leu Phe Thr Leu Phe Leu Ala
20 25 30
Ile Tyr Met Val Thr Val Ala Gly Asn Leu Gly Met Ile Val Leu Ile
35 40 45
Gln Ala Asn Ala Trp Leu His Met Pro Met Tyr Phe Phe Leu Ser His
50 55 60
Leu Ser Phe Val Asp Leu Cys Phe Ser Ser Asn Val Thr Pro Lys Met
65 70 75 80

Leu Glu Ile Phe Leu Ser Glu Lys Lys Ser Ile Ser Tyr Pro Ala Cys
 85 90 95
 Leu Val Gln Cys Tyr Leu Phe Ile Ala Leu Val His Val Glu Ile Tyr
 100 105 110
 Ile Leu Ala Val Met Ala Phe Asp Arg Tyr Met Ala Ile Cys Asn Pro
 115 120 125
 Leu Leu Tyr Gly Ser Arg Met Ser Lys Ser Val Cys Ser Phe Leu Ile
 130 135 140
 Thr Val Pro Tyr Val Tyr Gly Ala Leu Thr Gly Leu Met Glu Thr Met
 145 150 155 160
 Trp Thr Tyr Asn Leu Ala Phe Cys Gly Pro Asn Glu Ile Asn His Phe
 165 170 175
 Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ala Cys Ser Asp Thr Tyr
 180 185 190
 Asn Lys Glu Leu Ser Met Phe Ile Val Ala Gly Trp Asn Leu Ser Phe
 195 200 205
 Ser Leu Phe Ile Ile Cys Ile Ser Tyr Leu Tyr Ile Phe Pro Ala Ile
 210 215 220
 Leu Lys Ile Arg Ser Thr Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys
 225 230 235 240
 Gly Ser His Leu Thr Ala Val Thr Ile Phe Tyr Ala Thr Leu Phe Phe
 245 250 255
 Met Tyr Leu Arg Pro Pro Ser Lys Glu Ser Val Glu Gln Gly Lys Met
 260 265 270
 Val Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Leu Ile Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Asn Val Lys Glu Ala Leu Ile Lys Glu Leu
 290 295 300
 Ser Met Lys Ile Tyr Phe Ser
 305 310

<210> 32
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 32
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 gaattacaaa ttctcctcctt cacgctgttt ctggccattt acatgggtcac ggtggcaggg 120
 aaccttggca tgattgtcct catccaggcc aacgcctggc tccacatgcc catgtacttt 180
 ttcttgagcc acttatcctt cgtggatctg tgcttctctt ccaatgtgac tccaaagatg 240
 ctggagattt tcctttcaga gaagaaaagc atttcctatc ctgcctgtct tgtgcagtgt 300
 taccttttta tcgccttggt ccatgttgag atctacatcc tggctgtgat ggcctttgac 360
 cggtagatgg ccactctgcaa ccctctgctt tatggcagca gaatgtccaa gagtgtgtgc 420
 tccttcctca tcacgggtgcc ttatgtgtat ggagcgctca ctggcctgat ggagaccatg 480
 tggacctaca acctagcctt ctgtggcccc aatgaaatta atcacttcta ctgtgcggac 540

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ccaccactga ttaagctggc ttgttctgac acctacaaca aggagttgtc aatgtttatt 600
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ttccctgcta ttttaaagat tcgctctaca gagggcaggc aaaaagcttt ttctacctgt 720
ggctcccatc tgacagctgt cactatattc tatgcaaccc ttttcttcat gtatctcaga 780
ccccctcaa aggaatctgt tgaacagggt aaaatggtag ctgtatttta taccacagta 840
atccctatgc tgaaccttat aatttatagc cttagaaata aaaatgtaaa agaagcatta 900
atcaaagagc tgtcaatgaa gatatacttt tcttaa 936

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<210> 33
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Leu Asn Phe Thr Asp Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Ser Arg Arg Glu Trp Gln Val Leu Phe Phe Ile Ile Phe Leu Val Val
 20 25 30
 Tyr Ile Ile Thr Met Val Gly Asn Ile Gly Met Met Val Leu Ile Lys
 35 40 45
 Val Ser Pro Gln Leu Asn Asn Pro Met Tyr Phe Phe Leu Ser His Leu
 50 55 60
 Ser Phe Val Asp Val Trp Phe Ser Ser Asn Val Thr Pro Lys Met Leu
 65 70 75 80
 Glu Asn Leu Phe Ser Asp Lys Lys Thr Ile Thr Tyr Ala Gly Cys Leu
 85 90 95
 Val Gln Cys Phe Phe Phe Ile Ala Leu Val His Val Glu Ile Phe Ile
 100 105 110
 Leu Ala Ala Met Ala Phe Asp Arg Tyr Met Ala Ile Gly Asn Pro Leu
 115 120 125
 Leu Tyr Gly Ser Lys Met Ser Arg Val Val Cys Ile Arg Leu Ile Thr
 130 135 140
 Phe Pro Tyr Ile Tyr Gly Phe Leu Thr Ser Leu Ala Ala Thr Leu Trp
 145 150 155 160
 Thr Tyr Gly Leu Tyr Phe Cys Gly Lys Ile Glu Ile Asn His Phe Tyr
 165 170 175
 Cys Ala Asp Pro Pro Leu Ile Lys Met Ala Cys Ala Gly Thr Phe Val
 180 185 190
 Lys Glu Tyr Thr Met Ile Ile Leu Ala Gly Ile Asn Phe Thr Tyr Ser
 195 200 205
 Leu Thr Val Ile Ile Ile Ser Tyr Leu Phe Ile Leu Ile Ala Ile Leu
 210 215 220
 Arg Met Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Gly
 225 230 235 240
 Ser His Leu Thr Ala Val Ile Ile Phe Tyr Gly Thr Leu Ile Phe Met

245 250 255
 Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val
 260 265 270
 Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Met Ile Tyr
 275 280 285
 Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Met Met Lys Val Ile Ser
 290 295 300
 Arg Ser Cys
 305

<210> 34
 <211> 924
 <212> DNA
 <213> Homo sapiens

<400> 34
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 atcggcatga tgggtgtaaat caaggtcagt cctcagctta acaaccccat gtactttttc 180
 ctcatgctact tgtcatttgt tgatgtgtgg ttttcttcca atgtcacccc taaaatgttg 240
 gaaaacctgt tttcagataa aaaaacaatt acttatgctg gttgtttagt acagtgtttc 300
 ttcttcattg ctcttgtcca tgtggaaatt tttattcttg ctgcgatggc ctttgataga 360
 tacatggcaa ttgggaatcc tctgctttat ggcagtaaaa tgtcaagggg tgtctgtatt 420
 cgactgatta ctttccctta catttatggg tttctgacga gtctggcagc aacattatgg 480
 acttacggct tgtacttctg tggaaaaatt gagatcaacc atttctactg tgcagatcca 540
 cctctcatca aaatggcctg tgccgggacc tttgtaaaag aatatacaat gatcatactt 600
 gccggcatta acttcacata ttccctgact gtaattatca tctcttactt attcatcctc 660
 attgccattc tgcgaatgcg ctcagcagaa ggaaggcaga aggccctttc cacatgtggg 720
 tcccacttga cagctgtcat tatattctat ggtactctga tcttcatgta tctcagacgt 780
 cccacagagg agtctgtgga gcaggggaag atgggtggctg tgttctatac cacagtgatc 840
 cccatgttga atcccatgat ctacagtctg aggaacaagg atgtgaaaaa ggccatgatg 900
 aaagtgatca gcagatcatg ttaa 924

<210> 35
 <211> 305
 <212> PRT
 <213> Homo sapiens

<400> 35
 Met Ser Asn Thr Asn Gly Ser Ala Ile Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Leu Thr Asp Cys Pro Glu Leu Gln Ser Leu Leu Phe Val Leu Phe Leu
 20 25 30
 Val Val Tyr Leu Val Thr Leu Leu Gly Asn Leu Gly Met Ile Met Leu
 35 40 45
 Met Arg Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Thr
 50 55 60
 Asn Leu Ala Phe Val Asp Leu Cys Tyr Thr Ser Asn Ala Thr Pro Gln
 65 70 75 80
 Met Ser Thr Asn Ile Val Ser Glu Lys Thr Ile Ser Phe Ala Gly Cys

85

90

95

Phe Thr Gln Cys Tyr Ile Phe Ile Ala Leu Leu Leu Thr Glu Phe Tyr
 100 105 110
 Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asp Pro
 115 120 125
 Leu Arg Tyr Ser Val Lys Thr Ser Arg Arg Val Cys Ile Cys Leu Ala
 130 135 140
 Thr Phe Pro Tyr Val Tyr Gly Phe Ser Asp Gly Leu Phe Gln Ala Ile
 145 150 155 160
 Leu Thr Phe Arg Leu Thr Phe Cys Arg Ser Asn Val Ile Asn His Phe
 165 170 175
 Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ser Cys Ser Asp Thr Tyr
 180 185 190
 Val Lys Glu His Ala Met Phe Ile Ser Ala Gly Phe Asn Leu Ser Ser
 195 200 205
 Ser Leu Thr Ile Val Leu Val Ser Tyr Ala Phe Ile Leu Ala Ala Ile
 210 215 220
 Leu Arg Ile Lys Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr Cys
 225 230 235 240
 Gly Ser His Met Met Ala Val Thr Leu Phe Tyr Gly Thr Leu Phe Cys
 245 250 255
 Met Tyr Ile Arg Pro Pro Thr Asp Lys Thr Val Glu Glu Ser Lys Ile
 260 265 270
 Ile Ala Val Phe Tyr Thr Phe Val Ser Pro Val Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Gln Ala Leu Lys Asn Val Leu
 290 295 300
 Arg
 305

<210> 36
 <211> 918
 <212> DNA
 <213> Homo sapiens

<400> 36
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 ccggaactcc agtctctgct ttttgtgctg tttctgggtt tttacctcgt caccctgcta 120
 ggcaacctgg gcatgataat gttaatgaga ctggactctc gccttcacac gcccatgtac 180
 ttcttcctca ctaacttagc ctttgtggat ttgtgctata catcaaatgc aaccccgag 240
 atgtcgacta atatcgtatc tgagaagacc atttcctttg ctggttgctt tacacagtgc 300
 tacattttca ttgcccttct actcactgag ttttacatgc tggcagcaat ggcctatgac 360
 cgctatgtgg ccataatga ccctctgcgc tacagtgtga aaacgtccag gagagtgtgc 420
 atctgcttgg ccacatttcc ctatgtctat ggcttctcag atggactctt ccaggccatc 480
 ctgaccttcc gcctgacctt ctgtagatcc aatgtcatca accacttcta ctgtgctgac 540
 ccgccgctca ttaagctttc ttgttctgat acttatgtca aagagcatgc catgttcata 600

tctgctggct tcaacctctc cagctccctc accatcgtct tgggtgtccta tgccttcatt 660
cttgctgcca tcttccggat caaatcagca gaggggaaggc acaaggcatt ctccacctgt 720
ggttcccata tgatggctgt caccctgttt tatgggactc tcttttgcac gtatataaga 780
ccaccaacag ataagactgt tgaggaatct aaaataatag ctgtctttta cacctttgtg 840
agtccgggtac ttaatccatt gatctacagt ctgaggaata aagatgtgaa gcaggccttg 900
aagaatgtcc tgagatga 918

<210> 37
<211> 311
<212> PRT
<213> Homo sapiens

<400> 37
Met Glu Thr Lys Asn Tyr Ser Ser Ser Thr Ser Gly Phe Ile Leu Leu
1 5 10 15
Gly Leu Ser Ser Asn Pro Lys Leu Gln Lys Pro Leu Phe Ala Ile Phe
20 25 30
Leu Ile Met Tyr Leu Leu Thr Ala Val Gly Asn Val Leu Ile Ile Leu
35 40 45
Ala Ile Tyr Ser Asp Pro Arg Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60
Ser Asn Leu Ser Phe Met Asp Ile Cys Phe Thr Thr Val Ile Val Pro
65 70 75 80
Lys Met Leu Val Asn Phe Leu Ser Glu Thr Lys Ile Ile Ser Tyr Val
85 90 95
Gly Cys Leu Ile Gln Met Tyr Phe Phe Met Ala Phe Gly Asn Thr Asp
100 105 110
Ser Tyr Leu Leu Ala Ser Met Ala Ile Asp Arg Leu Val Ala Ile Cys
115 120 125
Asn Pro Leu His Tyr Asp Val Val Met Lys Pro Trp His Cys Leu Leu
130 135 140
Met Leu Leu Gly Ser Cys Ser Ile Ser His Leu His Ser Leu Phe Arg
145 150 155 160
Val Leu Leu Met Ser Arg Leu Ser Phe Cys Ala Ser His Ile Ile Lys
165 170 175
His Phe Phe Cys Asp Thr Gln Pro Val Leu Lys Leu Ser Cys Ser Asp
180 185 190
Thr Ser Ser Ser Gln Met Val Val Met Thr Glu Thr Leu Ala Val Ile
195 200 205
Val Thr Pro Phe Leu Cys Thr Ile Phe Ser Tyr Leu Gln Ile Ile Val
210 215 220
Thr Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Trp Lys Ala Phe Ser
225 230 235 240
Thr Cys Gly Ser His Leu Thr Val Val Val Leu Phe Tyr Gly Ser Val
245 250 255

Ile Tyr Val Tyr Phe Arg Pro Leu Ser Met Tyr Ser Val Met Lys Gly
260 265 270

Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
275 280 285

Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Arg Gly Leu Lys Lys
290 295 300

Leu Arg His Arg Ile Tyr Ser
305 310

<210> 38
<211> 936
<212> DNA
<213> Homo sapiens

<400> 38
atggagacaa agaattatag cagcagcacc tcaggettca tcctcctggg cctctcttcc 60
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gtggggaatg tgctcatcat cctggccatc tactctgacc ccaggctcca caccctatg 180
tacttttttc tcagcaactt gtctttcatg gatattctgct tcacaacagt catagtgcct 240
aagatgctgg tgaattttct atcagagaca aagattatct cttatgtggg ctgcctgac 300
cagatgtact tcttcatggc atttgggaac actgacagct acctgctggc ctctatggcc 360
atcgaccggc tgggtggccat ctgcaacccc ttacactatg atgtgggttat gaaaccatgg 420
cattgcctac tcatgctatt gggttcttgc agcatctccc acctacattc cctgttccgc 480
gtgctactta tgtctcgctt gtctttctgt gcctctcaca tcattaagca ctttttctgt 540
gacaccacgc ctgtgctaaa gctctcctgc tctgacacat cctccagcca gatgggtggg 600
atgactgaga ccttagctgt cattgtgacc cccttctctgt gtaccatctt ctctacctg 660
caaatcatcg tcaactgtgt cagaatcccc tctgcagccg ggaagtggaa ggccttctct 720
acctgtgggt cccacctcac tgtagtggtc ctgttctatg ggagtgtcat ctatgtctat 780
tttaggcctc tgtccatgta ctcaagtatg aagggccggg tagccacagt tatgtacaca 840
gtagtgcacac ccattgctgaa ccctttcatc tacagcctga ggaacaaaga tatgaaaagg 900
ggtttgaaga aattaagaca cagaatttac tcatag 936

<210> 39
<211> 316
<212> PRT
<213> Homo sapiens

<400> 39
Met Val Glu Glu Asn His Thr Met Lys Asn Glu Phe Ile Leu Thr Gly
1 5 10 15

Phe Thr Asp His Pro Glu Leu Lys Thr Leu Leu Phe Val Val Phe Phe
20 25 30

Ala Ile Tyr Leu Ile Thr Val Val Gly Asn Ile Ser Leu Val Ala Leu
35 40 45

Ile Phe Thr His Cys Arg Leu His Thr Pro Met Tyr Ile Phe Leu Gly
50 55 60

Asn Leu Ala Leu Val Asp Ser Cys Cys Ala Cys Ala Ile Thr Pro Lys
65 70 75 80

Met Leu Glu Asn Phe Phe Ser Glu Gly Lys Arg Ile Ser Leu Tyr Glu
85 90 95

Cys Ala Val Gln Phe Tyr Phe Leu Cys Thr Val Glu Thr Ala Asp Cys
 100 105 110
 Phe Leu Leu Ala Ala Val Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Gln Tyr His Ile Met Met Ser Lys Lys Leu Cys Ile Gln Met
 130 135 140
 Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Ile His Val
 145 150 155 160
 Gly Leu Val Phe Arg Leu Val Phe Cys Gly Leu Asn His Ile Asn His
 165 170 175
 Phe Tyr Cys Asp Thr Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro
 180 185 190
 Phe Ile Asn Glu Leu Val Leu Phe Ile Phe Ser Gly Ser Val Gln Val
 195 200 205
 Phe Thr Ile Gly Ser Val Leu Ile Ser Tyr Leu Tyr Ile Leu Leu Thr
 210 215 220
 Ile Phe Arg Met Lys Ser Lys Glu Gly Arg Ala Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Phe Ser Ser Val Ser Leu Phe Tyr Gly Ser Ile Phe
 245 250 255
 Phe Leu Tyr Ile Arg Pro Asn Leu Leu Glu Glu Gly Gly Asn Asp Ile
 260 265 270
 Pro Ala Ala Ile Leu Phe Thr Ile Val Val Pro Leu Leu Asn Pro Phe
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Ile Ser Val Leu Arg Lys Ile
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 305 310 315

<210> 40
 <211> 951
 <212> DNA
 <213> Homo sapiens

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 gggaatatta gtttgggtggc actgatattt acacactgtc ggcttcacac accaatgtac 180
 atctttctgg gaaatctggc tcttgtggat tcttgtctgt cctgtgctat taccctcaaa 240
 atgtagaga acttcttttc tgagggcaaa aggatttccc tctatgaatg tgcagtacag 300
 ttttattttc tttgcactgt ggaaactgca gactgctttc ttctggcagc agtggcctat 360
 gaccgctatg tggccatctg caaccactg cagtaccaca tcatgatgtc caagaaactc 420
 tgcattcaga tgaccacagg cgccttcata gctggaaatc tgcattccat gattcatgta 480
 gggcttgtat ttaggttagt tttctgtgga ttgaatcaca tcaaccactt ttactgtgat 540
 actcttcctt tgtatagact ctctgtgtt gaccctttca tcaatgaact gggtctattc 600
 atcttctcag gtccagttca agtctttacc ataggtagtg tcttaatatc ttatctctat 660

attcttctta ctatttttcag aatgaaatcc aaggagggaa gggccaaagc cttttctact 720
 tgtgcatccc acttttcatc agtttcatta ttctatggat ctattttttt cctatacatt 780
 agaccaaatt tgcttgaaga aggaggtaat gatataccag ctgctatttt atttacaata 840
 gtagttccct tactaaatcc tttcatttat agtctgagaa acaaggaagt aaatagtgtc 900
 ttaagaaaaa ttctgctgaa aataaaatct caaggaagtg tgaacaaatg a 951

<210> 41
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 41

Met	Glu	Pro	Arg	Lys	Asn	Val	Thr	Asp	Phe	Val	Leu	Leu	Gly	Phe	Thr
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			20					25					30		
Tyr	Ile	Leu	Thr	Met	Val	Gly	Asn	Leu	Leu	Ile	Val	Val	Thr	Val	Thr
	35						40					45			
Val	Ser	Glu	Thr	Leu	Gly	Ser	Pro	Met	Ser	Phe	Phe	Leu	Ala	Gly	Leu
	50					55					60				
Thr	Phe	Ile	Asp	Ile	Ile	Tyr	Ser	Ser	Ser	Ile	Ser	Pro	Arg	Leu	Ile
	65				70					75					80
Ser	Asp	Leu	Phe	Phe	Gly	Asn	Asn	Ser	Ile	Ser	Phe	Gln	Ser	Phe	Met
			85						90					95	
Ala	Gln	Leu	Phe	Ile	Glu	His	Leu	Phe	Gly	Gly	Ser	Glu	Val	Phe	Leu
		100						105					110		
Leu	Leu	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu
		115					120					125			
His	Tyr	Leu	Val	Ile	Met	Arg	Gln	Trp	Val	Cys	Val	Leu	Leu	Leu	Val
	130					135					140				
Val	Ser	Trp	Val	Gly	Gly	Phe	Leu	Gln	Ser	Val	Phe	Gln	Leu	Ser	Ile
145				150						155					160
Ile	Tyr	Gly	Leu	Pro	Phe	Cys	Gly	Pro	Asn	Val	Ile	Asp	His	Phe	Phe
			165						170					175	
Cys	Asp	Met	Tyr	Pro	Leu	Leu	Lys	Leu	Ala	Cys	Thr	Asp	Thr	His	Val
		180						185					190		
Ile	Gly	Leu	Leu	Val	Val	Ala	Asn	Gly	Gly	Leu	Ser	Cys	Thr	Ile	Ala
	195						200					205			
Phe	Leu	Leu	Leu	Leu	Ile	Ser	Tyr	Gly	Val	Ile	Leu	His	Ser	Leu	Lys
	210					215					220				
Lys	Leu	Ser	Gln	Lys	Gly	Arg	Gln	Lys	Ala	His	Ser	Thr	Cys	Ser	Ser
225					230					235					240
His	Ile	Thr	Val	Val	Val	Phe	Phe	Phe	Val	Pro	Cys	Ile	Phe	Met	Cys
			245						250					255	

Ala Arg Pro Ala Arg Thr Phe Ser Ile Asp Lys Ser Val Ser Val Phe
 260 265 270

Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
 275 280 285

Asn Ser Glu Met Thr Ser Ala Met Lys Lys Leu
 290 295

<210> 42
 <211> 900
 <212> DNA
 <213> Homo sapiens

<400> 42
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 ctgctcattg tagtgaccgt aactgtcagt gagaccctgg gctcaccaat gtccttcttt 180
 cttgctggct taacatttat agatatcatt tattcttcat ccatttcccc cagattgatt 240
 tcagacttgt tctttgggaa taattccata tcccttccaa ctttcatggc ccagctcttt 300
 atcgagcacc tttttggtgg gtcagaggtc tttctcctgt tggatgatggc ctatgaccgc 360
 tatgtggcca tctgtaagcc cttgcattat ttggttatca tgagacaatg ggtgtgtgtt 420
 ttgctgctgg tagtgtcctg ggttgaggga tttctgcaat cagtatttca acttagcatt 480
 atttatgggc tccattctg tggccccaat gtcattgatc attttttctg tgacatgtat 540
 cccttattga aactggcctg cactgacacc' catgttattg gcctcttagt ggtggccaat 600
 ggaggactgt cttgcactat tgcgtttctg ctcttactca tctcttatgg tgtcatcctg 660
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 cacatcactg tggttgtctt cttctttgtt ccttgatatt ttatgtgtgc tagacctgct 780
 aggaccttct ccattgacaa atcagtgagt gtgttttata cagtcataac cccaatgctg 840
 aaccccttaa tctacactct gagaaattct gagatgacaa gtgctatgaa gaagcttttag 900

<210> 43
 <211> 315
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (3)..(4)
 <223> Any amino acid

<220>
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<220>
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<220>
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<223> Any amino acid

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<221> MOD_RES

<222> (145)..(146)

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<221> MOD_RES

<222> (169)

<223> Any amino acid

<400> 43

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Gln Asp Pro Gly Val Xaa Lys Ala Leu Phe Val Met Phe Leu Leu Thr
20 25 30

Tyr Xaa Xaa Thr Val Val Gly Asn Leu Leu Ile Val Val Asp Ile Ile
35 40 45

Ala Ser Pro Xaa Leu Gly Ser Pro Met Tyr Phe Phe Leu Ala Cys Leu
50 55 60

Ser Phe Ile Asp Ala Ala Tyr Ser Thr Thr Ile Ser Pro Lys Leu Ile
65 70 75 80

Val Gly Leu Phe Cys Asp Lys Lys Thr Ile Ser Phe Gln Gly Cys Met
85 90 95

Gly Gln Leu Phe Ile Asp His Phe Phe Gly Gly Ala Glu Val Phe Leu
100 105 110

Leu Val Val Met Ala Cys Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Leu Thr Ile Met Asn Arg Gln Val Cys Phe Leu Leu Leu Val
130 135 140

Xaa Xaa Met Ile Gly Gly Phe Val His Ser Ala Phe Gln Ile Val Val
145 150 155 160

Tyr Ser Leu Pro Phe Cys Gly Pro Xaa Val Ile Val His Phe Ser Cys
165 170 175

Asp Met His Pro Leu Leu Glu Leu Ala Cys Thr Asp Thr Tyr Phe Ile
180 185 190

Gly Leu Thr Val Val Val Asn Ser Gly Ala Ile Cys Met Val Ile Phe
195 200 205

Asn Leu Leu Leu Ile Ser Tyr Gly Val Ile Leu Ser Ser Leu Lys Thr
210 215 220

Tyr Ser Gln Glu Lys Arg Gly Lys Ala Leu Ser Thr Cys Ser Ser Gly
225 230 235 240

Ser Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Phe Ile Tyr Val
245 250 255

Arg Pro Val Ser Asn Phe Pro Thr Asp Lys Phe Met Thr Val Phe Tyr
 260 265 270
 Thr Ile Ile Thr His Met Leu Ser Pro Leu Ile Tyr Thr Leu Arg Asn
 275 280 285
 Ser Glu Met Arg Asn Ala Ile Glu Lys Leu Leu Gly Lys Lys Leu Thr
 290 295 300
 Ile Phe Ile Ile Gly Gly Val Ser Val Leu Met
 305 310 315

<210> 44
 <211> 948
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (9)..(12)
 <223> a, t, c, or g

<220>
 <221> modified_base
 <222> (11)
 <223> a, t, c, or g

<220>
 <221> modified_base
 <222> (64)..(66)
 <223> a, t, c, or g

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 <223> a, t, c, or g

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 <223> a, t, c, or g

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 <223> a, t, c, or g

<220>
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 <222> (432)..(433)
 <223> a, t, c, or g

<220>
 <221> modified_base
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 <223> a, t, c, or g

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<223> a, t, c, or g

<400> 44

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ctgctcattg tngtggatat tattgccagc ccttnnttgg gTtccccaat gtatttcttc 180
cttgccTgcc tgtcatttat agatgctgca tattccacta ccatttctcc caagttaatt 240
gtaggcttat tctgtgataa aaagactatt tccttccaag gttgcatggg ccagctattt 300
atagaccatt tctttggTgg ggctgaggTc ttccttctgg tggTgatggc ctgtgatcgC 360
tatgtggcca tctgtaagcc actgcactat ttgaccatca tgaatcgaca ggtttgcttc 420
cttctgttgg tnnTnnccat gattggaggT tttgtacatt ctgcgtttca aattgttgtg 480
tacagtctcc ctttctgtgg tcccnatgtc attgttcatt tcagtTgtga catgcaccca 540
ttactggaac tggcatgcac tgacacctac tttataggcc tCactgttgt tgtcaatagt 600
ggagcaatct gtatggTcat tttcaacctt ctgttaatct cctatggagt catcctaagc 660
tcccttaaaa cttacagtca ggaaaagagg ggtaaagcct tgtctacctg cagctccggc 720
agtaccgttg ttgtcctctt ttttgtacct tgtattttca tatatgttag acctgtttca 780
aactttccta ctgataagtt catgactgtg ttttatacca ttatcacaca catgctgagt 840
cctttaatat atacgttgag aaattcagag atgagaaatg ctatagaaaa actcttgggt 900
aaaaagttaa ctatatTTat tataggagga gtgtccgtcc tcatgtag 948
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<210> 45

<211> 314

<212> PRT

<213> Homo sapiens

<400> 45

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Phe Met Asp His Pro Lys Leu Glu Ile Pro Leu Phe Leu Val Phe Leu
      20              25              30

Ser Phe Tyr Leu Val Thr Leu Leu Gly Asn Val Gly Met Ile Met Leu
      35              40              45

Ile Gln Val Asp Val Lys Leu Tyr Thr Pro Met Tyr Phe Phe Leu Ser
      50              55              60

His Leu Ser Leu Leu Asp Ala Cys Tyr Thr Ser Val Ile Thr Pro Gln
      65              70              75              80

Ile Leu Ala Thr Leu Ala Thr Gly Lys Thr Val Ile Ser Tyr Gly His
      85              90              95

Cys Ala Ala Gln Phe Phe Leu Phe Thr Ile Cys Ala Gly Thr Glu Cys
      100              105              110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Arg Asn
      115              120              125

Pro Leu Leu Tyr Thr Val Ala Met Asn Pro Arg Leu Cys Trp Ser Leu
      130              135              140

Val Val Gly Ala Tyr Val Cys Gly Val Ser Gly Ala Ile Leu Arg Thr
      145              150              155              160

Thr Cys Thr Phe Thr Leu Ser Phe Cys Lys Asp Asn Gln Ile Asn Phe
      165              170              175

Phe Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Ala Cys Ser Asp Thr
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180	185	190
Ala Asn Ile Glu Ile Val Ile Ile Phe Phe Gly Asn Phe Val Ile Leu		
195	200	205
Ala Asn Ala Ser Val Ile Leu Ile Ser Tyr Leu Leu Ile Ile Lys Thr		
210	215	220
Ile Leu Lys Val Lys Ser Ser Gly Gly Arg Ala Lys Thr Phe Ser Thr		
225	230	235 240
Cys Ala Ser His Ile Thr Ala Val Ala Leu Phe Phe Gly Ala Leu Ile		
245	250	255
Phe Met Tyr Leu Gln Ser Gly Ser Gly Lys Ser Leu Glu Glu Asp Lys		
260	265	270
Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Arg Lys Val		
290	295	300
Ala Arg Arg Leu Gln Val Ser Leu Ser Met		
305	310	

<210> 46
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 46
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 gggaatgtgg ggatgattat gttaatccaa gtagatgtca aactctacac cccaatgtac 180
 ttcttcctga gccacctctc cctgctggat gcctgttaca cctcagtcac caccctcag 240
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 ttctttttat tcaccatctg tgcaggcaca gagtgctttc tgctggcagt gatggcctat 360
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 tgctggagcc tgggtggtagg agcctatgtc tgtgggggtg caggagccat cctgcgtacc 480
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 tgtgcctctc acatcactgc tgtggccctt ttctttggag cccttatctt catgtatctg 780
 caaagtggct caggcaaadc tctggaggaa gacaaagtcg tgtctgtctt ctatacagtg 840
 gtcaccccca tgctgaaccc tctgatctac agcttaagaa acaaagatgt aaaagacgcc 900
 ttcagaaagg tcgctaggag actccagggtg tccctgagca tgtag 945

<210> 47
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 47
 Met Glu Thr Gly Asn Leu Thr Trp Val Ser Asp Phe Val Phe Leu Gly
 1 5 10 15
 Leu Ser Gln Thr Arg Glu Leu Gln Arg Phe Leu Phe Leu Met Phe Leu

20					25					30				
Phe	Val	Tyr	Ile	Thr	Thr	Val	Met	Gly	Asn	Ile	Leu	Ile	Ile	Thr
	35					40					45			
Val	Thr	Ser	Asp	Ser	Gln	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Arg
	50					55					60			
Asn	Leu	Ala	Val	Leu	Asp	Leu	Cys	Phe	Ser	Ser	Val	Thr	Ala	Lys
	65					70					75			80
Met	Leu	Val	Asp	Leu	Leu	Ser	Glu	Lys	Lys	Thr	Ile	Ser	Tyr	Gln
				85					90					95
Cys	Met	Gly	Gln	Ile	Phe	Phe	Phe	His	Phe	Leu	Gly	Gly	Ala	Met
			100					105					110	Val
Phe	Phe	Leu	Ser	Val	Met	Ala	Phe	Asp	Arg	Leu	Ile	Ala	Ile	Ser
			115					120					125	Arg
Pro	Leu	Arg	Tyr	Val	Thr	Val	Met	Asn	Thr	Gln	Leu	Trp	Val	Gly
						135					140			Leu
Val	Val	Ala	Thr	Trp	Val	Gly	Gly	Phe	Val	His	Ser	Ile	Val	Gln
	145					150					155			160
Ala	Leu	Met	Leu	Pro	Leu	Pro	Phe	Cys	Gly	Pro	Asn	Ile	Leu	Asp
				165					170					175
Phe	Tyr	Cys	Asp	Val	Pro	Gln	Val	Leu	Arg	Leu	Ala	Cys	Thr	Asp
			180					185					190	Thr
Ser	Leu	Leu	Glu	Phe	Leu	Lys	Ile	Ser	Asn	Ser	Gly	Leu	Leu	Asp
			195				200					205		Val
Val	Trp	Phe	Phe	Leu	Leu	Leu	Met	Ser	Tyr	Leu	Phe	Ile	Leu	Val
	210					215					220			Met
Leu	Arg	Ser	His	Pro	Gly	Glu	Ala	Arg	Arg	Lys	Ala	Ala	Ser	Thr
	225					230					235			240
Thr	Thr	His	Ile	Ile	Val	Val	Ser	Met	Ile	Phe	Val	Pro	Ser	Ile
			245						250					255
Leu	Tyr	Ala	Arg	Pro	Phe	Thr	Pro	Phe	Pro	Met	Asp	Lys	Leu	Val
			260					265					270	Ser
Ile	Gly	His	Thr	Val	Met	Thr	Pro	Met	Leu	Asn	Pro	Met	Ile	Tyr
		275					280					285		Thr
Leu	Arg	Asn	Gln	Asp	Met	Gln	Ala	Ala	Val	Arg	Arg	Leu	Gly	Arg
	290					295					300			His
Arg	Leu	Val												
	305													

<210> 48
 <211> 924
 <212> DNA
 <213> Homo sapiens

<400> 48

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ggaaacatcc ttatcatcat cacagtgaac tctgattccc agctccacac acccatgtac 180
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gaccgcctca ttgccatctc cgggccctc cgctatgtca ccgtcatgaa cactcagctc 420
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accaccaca tcatcgtggg ttccatgac ttctgtccaa gcatttacct ctatgcccg 780
cccttctctc cattccctat ggacaagctt gtgtccatcg gccacacagt catgacccc 840
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<210> 49

<211> 310

<212> PRT

<213> Homo sapiens

<400> 49

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      20              25              30

Phe Tyr Thr Val Thr Val Val Gly Asn Leu Gly Leu Ile Thr Leu Ile
      35              40              45

Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe Asn
      50              55              60

Leu Ser Leu Ile Asp Phe Cys Phe Ser Thr Thr Ile Thr Pro Lys Met
      65              70              75              80

Leu Met Ser Phe Val Ser Arg Lys Asn Ile Ile Ser Phe Thr Gly Cys
      85              90              95

Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Val Ser Glu Ser Phe
      100              105              110

Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro
      115              120              125

Leu Leu Tyr Thr Val Thr Met Ser Cys Gln Val Cys Leu Leu Leu Leu
      130              135              140

Leu Gly Ala Tyr Gly Met Gly Phe Ala Gly Ala Met Ala His Thr Gly
      145              150              155              160

Ser Ile Met Asn Leu Thr Phe Cys Ala Asp Asn Leu Val Asn His Phe
      165              170              175

Met Cys Asp Ile Leu Pro Leu Leu Glu Leu Ser Cys Asn Ser Ser Tyr
      180              185              190
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Met Asn Glu Leu Val Val Phe Ile Val Val Ala Val Asp Val Gly Met
195 200 205

Pro Ile Val Thr Val Phe Ile Ser Tyr Ala Leu Ile Leu Ser Ser Ile
210 215 220

Leu His Asn Ser Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Ser Ser His Ile Ile Val Val Ser Leu Phe Phe Gly Ser Gly Ala Phe
245 250 255

Met Tyr Leu Lys Pro Leu Ser Ile Leu Pro Leu Glu Gln Gly Lys Val
260 265 270

Ser Ser Leu Phe Tyr Thr Ile Ile Val Pro Val Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Arg Thr Leu
290 295 300

Gly Arg Lys Ile Phe Ser
305 310

<210> 50
<211> 933
<212> DNA
<213> Homo sapiens

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aacctgggct tgataacctt gattgggctg aactctcacc tgcacactcc catgtacttc 180
ttccttttta acctctcttt aatagatttc tgtttctcca ctaccatcac tcccaaatg 240
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cgctacgtgg ccactctgtaa cccactggtt tacacagtca ccatgtcttg ccagggtgtg 420
tgctcctttt tggtgggtgc ctatgggatg gggtttgctg gggccatggc ccacacagga 480
agcataatga acctgacctt ctgtgctgac aaccttgtca atcatttcat gtgtgacatc 540
cttctctctc ttgagctctc ctgcaacagc tcttacatga atgagctggt ggtctttatt 600
gtgggtggctg ttgacgttgg aatgcccatt gtcactgtct ttatttctta tgccctcatc 660
ctctccagca ttctacacaa cagttctaca gaaggcaggt ccaaagcctt tagtacttgc 720
agttcccaca taattgtagt ttctcttttc tttgggtctg gtgctttcat gtatctcaaa 780
cccctttcca tctgcccct cgagcaaggg aaagtgtcct ccctgttcta taccataata 840
gtccccgtgt taaaccatt aatctatagc ttgaggaaca aggatgtcaa agttgcctg 900
aggagaactt tgggcagaaa aatcttttct taa 933

<210> 51
<211> 316
<212> PRT
<213> Homo sapiens

<400> 51
Met Pro Ser Gln Asn Tyr Ser Ile Ile Ser Glu Phe Asn Leu Phe Gly
1 5 10 15

Phe Ser Ala Phe Pro Gln His Leu Leu Pro Ile Leu Phe Leu Leu Tyr
20 25 30

Leu Leu Met Phe Leu Phe Thr Leu Leu Gly Asn Leu Leu Ile Met Ala
 35 40 45
 Thr Ile Trp Ile Glu His Arg Leu His Thr Pro Met Tyr Leu Phe Leu
 50 55 60
 Cys Thr Leu Ser Val Ser Glu Ile Leu Phe Thr Val Ala Ile Thr Pro
 65 70 75 80
 Arg Met Leu Ala Asp Leu Leu Ser Thr His His Ser Ile Thr Phe Val
 85 90 95
 Ala Cys Ala Asn Gln Met Phe Phe Ser Phe Met Phe Gly Phe Thr His
 100 105 110
 Ser Phe Leu Leu Leu Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125
 His Pro Leu Arg Tyr Asn Val Leu Met Ser Pro Arg Asp Cys Ala His
 130 135 140
 Leu Val Ala Cys Thr Trp Ala Gly Gly Ser Val Met Gly Met Met Val
 145 150 155 160
 Thr Thr Ile Val Phe His Leu Thr Phe Cys Gly Ser Asn Val Ile His
 165 170 175
 His Phe Phe Cys His Val Leu Ser Leu Leu Lys Leu Ala Cys Glu Asn
 180 185 190
 Lys Thr Ser Ser Val Ile Met Gly Val Met Leu Val Cys Val Thr Ala
 195 200 205
 Leu Ile Gly Cys Leu Phe Leu Ile Ile Leu Ser Tyr Val Phe Ile Val
 210 215 220
 Ala Ala Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg His Lys Thr Phe
 225 230 235 240
 Ser Thr Cys Val Ser His Leu Thr Val Val Val Thr His Tyr Ser Phe
 245 250 255
 Ala Ser Phe Ile Tyr Leu Lys Pro Lys Gly Leu His Ser Met Tyr Ser
 260 265 270
 Asp Ala Leu Met Ala Thr Thr Tyr Thr Val Phe Thr Pro Phe Leu Ser
 275 280 285
 Pro Ile Ile Phe Ser Leu Arg Asn Lys Glu Leu Lys Asn Ala Ile Asn
 290 295 300
 Lys Asn Phe Tyr Arg Lys Phe Cys Pro Pro Ser Ser
 305 310 315

<210> 52
 <211> 951
 <212> DNA
 <213> Homo sapiens

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<400> 52
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ccccagcacc tcctgcccac cttgttcctg ctgtacctcc tgatgttcct gttcacattg 120
ctgggcaacc ttctcatcat ggccacaatc tggattgaac acagactcca cacacccatg 180
tacctcttct tgtgcaccct ctccgtctct gagattctgt tcaactgttg ccatcaccct 240
cgcattgctg ctgatctgct ttccacccat cattccatca cctttgtggc ttgtgccaac 300
cagatgttct tctccttcat gtttggtctt actcactcct tccttctcct ggtcatgggc 360
tatgatcgct atgtggccat ctgccacca ctgcgttaca atgtgctcat gagccccctg 420
gactgtgccc atcttgtggc ctgtacctgg gctgggtggc cagtcatggg gatgatggg 480
acaacgatag ttttcacact cactttctgt gggctaatg tgatccacca ttttttctgt 540
catgtgcttt ccctcttgaa gttggcctgt gaaaacaaga catcatctgt catcatgggt 600
gtgatgctgg tgtgtgtcac agccctgata ggctgtttat tcctcatcat cctctcctat 660
gtcttcattg tggctgccat cttgaggatt ccctctgccg aaggccggca caagacattt 720
tctacgtgtg tatccacact cactgtggtg gtcacgcact atagttttgc ctcctttatc 780
tacctcaagc ccaagggcct ccattctatg tacagtgacg ccttgatggc caccacctat 840
actgtcttca ccccttcct tagcccaatc attttcagcc taaggaacaa ggagctgaag 900
aatgccataa ataaaaactt ttacagaaaa ttctgtcctc caagttcctg a 951

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<210> 53
<211> 310
<212> PRT
<213> Homo sapiens

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<220>
<221> MOD_RES
<222> (126)
<223> Any amino acid

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<220>
<221> MOD_RES
<222> (146)
<223> Any amino acid

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<220>
<221> MOD_RES
<222> (148)
<223> Any amino acid

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<400> 53
Met Pro Asn Phe Thr Asp Val Thr Glu Phe Thr Leu Leu Gly Leu Thr
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Cys Arg Gln Glu Leu Gln Val Leu Phe Phe Val Val Phe Leu Ala Val
      20             25             30

Tyr Met Ile Thr Leu Leu Gly Asn Ile Gly Met Ile Ile Leu Ile Ser
  35             40             45

Ile Ser Pro Gln Leu Gln Ser Pro Met Tyr Phe Phe Leu Ser His Leu
  50             55             60

Ser Phe Ala Asp Val Cys Phe Ser Ser Asn Val Thr Pro Lys Met Leu
  65             70             75             80

Glu Asn Leu Leu Ser Glu Thr Lys Thr Ile Ser Tyr Val Gly Cys Leu
      85             90             95

Val Gln Cys Tyr Phe Phe Ile Ala Val Val His Val Glu Val Tyr Ile
  100             105             110

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Leu Ala Val Met Ala Phe Asp Arg Tyr Met Ala Gly Cys Xaa Pro Leu
 115 120 125
 Leu Tyr Gly Ser Lys Met Ser Arg Thr Val Cys Val Arg Leu Ile Ser
 130 135 140
 Val Xaa Tyr Xaa Tyr Gly Phe Ser Val Ser Leu Ile Cys Thr Leu Trp
 145 150 155 160
 Thr Tyr Gly Leu Tyr Phe Cys Gly Asn Phe Glu Ile Asn His Phe Tyr
 165 170 175
 Cys Ala Asp Pro Pro Leu Ile Gln Ile Ala Cys Gly Arg Val His Ile
 180 185 190
 Lys Glu Ile Thr Met Ile Val Ile Ala Gly Ile Asn Phe Thr Tyr Ser
 195 200 205
 Leu Ser Val Val Leu Ile Ser Tyr Thr Leu Ile Val Val Ala Val Leu
 210 215 220
 Arg Met Arg Ser Ala Asp Gly Arg Arg Lys Ala Phe Ser Thr Cys Gly
 225 230 235 240
 Ser His Leu Thr Ala Val Ser Met Phe Tyr Gly Thr Pro Ile Phe Met
 245 250 255
 Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val
 260 265 270
 Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Met Ile Tyr
 275 280 285
 Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Val Asn Lys Ala Ile Thr
 290 295 300
 Lys Thr Tyr Val Arg Gln
 305 310

<210> 54
 <211> 933
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (378)
 <223> a, t, c, or g

<220>
 <221> modified_base
 <222> (436)..(438)
 <223> a, t, c, or g

<220>
 <221> modified_base
 <222> (443)..(444)
 <223> a, t, c, or g

<400> 54

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atgcctaatt tcacggatgt gacagaattt actctcctgg ggctgacctg tcgtcaggag 60
ctacaggttc tcttttttgt ggtgttccta gcggtttaca tgatcactct gttgggaaat 120
attggtatga tcattttgat tagcatcagt cctcagcttc agagtcccat gtactttttc 180
ctgagtcacg tgtcttttgc ggacgtgtgc ttctcctcca acgttacccc caaaatgctg 240
gaaaacttat tatcagagac aaaaaccatt tcctatgtgg gatgcttggg gcagtgtctac 300
tttttcattg ccgttggtcca cgtggaggtc tatatcctgg ctgtgatggc ctttgacagg 360
tacatggccg gctgcaancc tctgctttat ggcagtaaaa tgtctaggac tgtgtgtgtt 420
cggctcatct ctgtgnnta tgnntatgga ttctctgtca gcctaatatg cacactatgg 480
acttatggct tatacttctg tggaaacttt gaaatcaatc acttctattg tgcagatccc 540
cctctcatcc agattgcctg tgggagagtg cacatcaaag aaatcacaaat gattgttatt 600
gctggaatta acttcacata ttccctctcg gtggctcctca tctcctacac tctcattgta 660
gtagctgtgc tacgcatgcg ctctgccgat ggcaggagga aggcgttctc cacctgtggg 720
tcccacttga cggctgtttc tatgttttat gggaccccca tcttcatgta tctcaggaga 780
cccactgagg aatccgtaga gcagggcaaa atggtggctg tgttttacac cacagtaatt 840
cctatgttga atcccatgat ctacagtctg agaaataagg atgtaaaaga agcagtcaac 900
aaagcaatca ccaagacata tgtgaggcag taa 933

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<210> 55
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 55

Met	Met	Ser	Phe	Ala	Pro	Asn	Ala	Ser	His	Ser	Pro	Val	Phe	Leu	Leu
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Leu	Gly	Phe	Ser	Arg	Ala	Asn	Ile	Ser	Tyr	Thr	Leu	Leu	Phe	Phe	Leu
			20					25					30		
Phe	Leu	Ala	Ile	Tyr	Leu	Thr	Thr	Ile	Leu	Gly	Asn	Val	Thr	Leu	Val
		35					40					45			
Leu	Leu	Ile	Ser	Trp	Asp	Ser	Arg	Leu	His	Ser	Pro	Met	Tyr	Tyr	Leu
	50					55					60				
Leu	Arg	Gly	Leu	Ser	Val	Ile	Asp	Met	Gly	Leu	Ser	Thr	Val	Thr	Leu
65					70					75					80
Pro	Gln	Leu	Leu	Ala	His	Leu	Val	Ser	His	Tyr	Pro	Thr	Ile	Pro	Ala
				85					90					95	
Ala	Arg	Cys	Leu	Ala	Gln	Phe	Phe	Phe	Phe	Tyr	Ala	Phe	Gly	Val	Thr
			100					105					110		
Asp	Thr	Leu	Val	Ile	Ala	Val	Met	Ala	Leu	Asp	Arg	Tyr	Val	Ala	Ile
		115					120					125			
Cys	Asp	Pro	Leu	His	Tyr	Ala	Leu	Val	Met	Asn	His	Gln	Arg	Cys	Ala
	130					135					140				
Cys	Leu	Leu	Ala	Leu	Ser	Trp	Val	Val	Ser	Ile	Leu	His	Thr	Met	Leu
145					150					155					160
Arg	Val	Gly	Leu	Val	Leu	Pro	Leu	Cys	Trp	Thr	Gly	Asp	Ala	Gly	Gly
			165						170					175	
Asn	Val	Asn	Leu	Pro	His	Phe	Phe	Cys	Asp	His	Arg	Pro	Leu	Leu	Arg
			180					185					190		
Ala	Ser	Cys	Ser	Asp	Ile	His	Ser	Asn	Glu	Leu	Ala	Ile	Phe	Phe	Glu

195 200 205
 Gly Gly Phe Leu Met Leu Gly Pro Cys Ala Leu Ile Val Leu Ser Tyr
 210 215 220
 Val Arg Ile Gly Ala Ala Ile Leu Arg Leu Pro Ser Ala Ala Gly Arg
 225 230 235 240
 Arg Arg Ala Val Ser Thr Cys Gly Ser His Leu Thr Met Val Gly Phe
 245 250 255
 Leu Tyr Gly Thr Ile Ile Cys Val Tyr Phe Gln Pro Pro Phe Gln Asn
 260 265 270
 Ser Gln Tyr Gln Asp Met Val Ala Ser Val Met Tyr Thr Ala Ile Thr
 275 280 285
 Pro Leu Ala Asn Pro Phe Val Tyr Ser Leu His Asn Lys Asp Val Lys
 290 295 300
 Gly Ala Leu Cys Arg Leu Leu Glu Trp Val Lys Val Asp Pro
 305 310 315

<210> 56
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 56
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 atactgggga atgtgacact ggtgctgctc atctcctggg actccagact gcactcacc 180
 atgtattatc tgcttcgtgg cctctctgtg atagacatgg ggctatccac agttacactg 240
 cccagttgc tggccattt ggtctctcat taccacaacca ttctgctgc ccgctgcttg 300
 gctcagttct ttttcttcta tgcatttggg gttacagata cacttgtcat tgctgtcatg 360
 gctctggatc gctatgtggc catctgtgac cccctgcact atgctttggt aatgaatcac 420
 caacggtgtg cctgcttact agccttgagc tgggtgggtg ccatactgca caccatgttg 480
 cgtgtgggac tegtctgcc tctttgctgg actggggatg ctgggggcaa cgttaacctt 540
 ctcacttct tttgtgacca ccggccactt ctgcgagcct cttgttctga catacattct 600
 aatgagctgg ccatattctt tgagggtggc ttccttatgc tggggccctg tgccctcatt 660
 gtactctctt atgtccgaat tggggccgct attctacgtt tgccttcagc tgcgtggtcg 720
 cgccgagcag tctccacctg tggatcccac ctcaccatgg ttggtttcct ctacggcacc 780
 atcatttgtg tctacttcca gcctcccttc cagaactctc agtatcagga catggtggct 840
 tcagtaaatgt atactgcat tacaccttg gccaacccat ttgtgtatag cctccacaat 900
 aaggatgtca aggggtgcact ctgcaggctg cttgaatggg tgaaggtaga cccctga 957

<210> 57
 <211> 326
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (142)..(143)
 <223> Any amino acid

<400> 57
 Met Gly Phe Leu Ser Pro Met His Pro Cys Arg Pro Pro Thr Gln Arg
 1 5 10 15

Arg	Met	Ala	Ala	Gly	Asn	His	Ser	Thr	Val	Thr	Glu	Phe	Ile	Leu	Lys	20	25	30
Gly	Leu	Thr	Lys	Arg	Ala	Asp	Leu	Gln	Leu	Pro	Leu	Phe	Leu	Leu	Phe	35	40	45
Leu	Gly	Ile	Tyr	Leu	Val	Thr	Ile	Val	Gly	Asn	Leu	Gly	Met	Ile	Thr	50	55	60
Leu	Ile	Cys	Leu	Asn	Ser	Gln	Leu	His	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	65	70	75
Ser	Asn	Leu	Ser	Leu	Met	Asp	Leu	Cys	Tyr	Ser	Ser	Val	Ile	Thr	Pro	85	90	95
Lys	Met	Leu	Val	Asn	Phe	Val	Ser	Glu	Lys	Asn	Ile	Ile	Ser	Tyr	Ala	100	105	110
Gly	Cys	Met	Ser	Gln	Leu	Tyr	Phe	Phe	Leu	Val	Phe	Val	Ile	Ala	Glu	115	120	125
Cys	Tyr	Met	Leu	Thr	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Xaa	Xaa	Cys	130	135	140
His	Pro	Leu	Leu	Tyr	Asn	Ile	Ile	Met	Ser	His	His	Thr	Cys	Leu	Leu	145	150	155
Leu	Val	Ala	Val	Val	Tyr	Ala	Ile	Gly	Leu	Ile	Gly	Ser	Thr	Ile	Glu	165	170	175
Thr	Gly	Leu	Met	Leu	Lys	Leu	Pro	Tyr	Cys	Glu	His	Leu	Ile	Ser	His	180	185	190
Tyr	Phe	Cys	Asp	Ile	Leu	Pro	Leu	Met	Lys	Leu	Ser	Cys	Ser	Ser	Thr	195	200	205
Tyr	Asp	Val	Glu	Met	Thr	Val	Phe	Phe	Ser	Ala	Gly	Phe	Asn	Ile	Ile	210	215	220
Val	Thr	Ser	Leu	Thr	Val	Leu	Val	Ser	Tyr	Thr	Phe	Ile	Leu	Ser	Ser	225	230	235
Ile	Leu	Gly	Ile	Ser	Thr	Thr	Glu	Gly	Arg	Ser	Lys	Ala	Phe	Ser	Thr	245	250	255
Cys	Ser	Ser	His	Leu	Ala	Ala	Val	Gly	Met	Phe	Tyr	Gly	Ser	Thr	Ala	260	265	270
Phe	Met	Tyr	Leu	Lys	Pro	Ser	Thr	Ile	Ser	Ser	Leu	Thr	Gln	Glu	Asn	275	280	285
Val	Ala	Ser	Val	Phe	Tyr	Thr	Thr	Val	Ile	Pro	Met	Leu	Asn	Pro	Leu	290	295	300
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Lys	Ala	Ala	Val	Gln	Lys	Thr	305	310	315
Leu	Arg	Gly	Lys	Leu	Phe											325		

<210> 58
<211> 981
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> (425)
<223> a, t, c, or g

<220>
<221> modified_base
<222> (427)
<223> a, t, c, or g

<400> 58
atggggttct tgtctcccat gcatccctgc aggcctccca cccagaggag aatggctgca 60
ggaaatcact ctacagtgc agagttcatt ctcaagggtt taacgaagag agcagacctc 120
cagctccccc tctttctcct ctccctcggt atctacttgg tcaccatcgt ggggaacctg 180
ggcatgatca ctctaatttg tctgaactct cagctgcaca ccccatgta ctactttctc 240
agcaatctgt cactcatgga tctctgctac tcctccgtca ttacccttaa gatgctggtg 300
aactttgtgt cagagaaaaa catcatctcc tacgcagggt gcatgtcaca gctctacttc 360
ttccttggtt ttgtcattgc tgagtgttac atgctgacag tgatggccta cgaccgctat 420
gttgncttct gccacccttt gctttacaac atcattatgt ctcatcacac ctgcctgctg 480
ctgggtggctg tgggtctacgc catcggaactc attggctcca caatagaaac tggcctcatg 540
ttaaaactgc cctattgtga gcacctcatc agtcaactact tctgtgacat cctccctctc 600
atgaagctgt cctgctctag cacctatgat gttgagatga cagtcttctt ttcggctgga 660
ttcaacatca tagtcacgag cttaacagtt cttgtttctt acaccttcat tctctccagc 720
atcctcggca tcagcaccac agaggggaga tccaaagcct tcagcacctg cagctccac 780
cttgagccg tgggaatgtt ctatggatca actgcattca tgtacttaaa accctccaca 840
atcagttcct tgaccagga gaatgtggcc tctgtgttct acaccaggt aatccccatg 900
ttgaatcccc taatctacag cctgaggaac aaggaagtaa aggctgccgt gcagaaaacg 960
ctgaggggta aactgttttg a 981

<210> 59
<211> 311
<212> PRT
<213> Homo sapiens

<400> 59
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1 5 10 15
Leu Ser Glu Asp Thr Thr Val Cys Ala Ile Leu Phe Leu Val Phe Leu
20 25 30
Gly Ile Tyr Val Val Thr Leu Met Gly Asn Ile Ser Ile Ile Val Leu
35 40 45
Ile Arg Arg Ser His His Leu His Thr Pro Met Tyr Ile Phe Leu Cys
50 55 60
His Leu Ala Phe Val Asp Ile Gly Tyr Ser Ser Ser Val Thr Pro Val
65 70 75 80
Met Leu Met Ser Phe Leu Arg Lys Glu Thr Ser Leu Pro Val Ala Gly
85 90 95
Cys Val Ala Gln Leu Cys Ser Val Val Thr Phe Gly Thr Ala Glu Cys

100										105										110										
Phe	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Ser															
			115					120					125																	
Pro	Leu	Leu	Tyr	Ser	Thr	Cys	Met	Ser	Pro	Gly	Val	Cys	Ile	Ile	Leu															
			130				135					140																		
Val	Gly	Met	Ser	Tyr	Leu	Gly	Gly	Cys	Val	Asn	Ala	Trp	Thr	Phe	Ile															
						150				155					160															
Gly	Cys	Leu	Leu	Arg	Leu	Ser	Phe	Cys	Gly	Pro	Asn	Lys	Val	Asn	His															
				165					170					175																
Phe	Phe	Cys	Asp	Tyr	Ser	Pro	Leu	Leu	Lys	Leu	Ala	Cys	Ser	His	Asp															
			180					185					190																	
Phe	Thr	Phe	Glu	Ile	Ile	Pro	Ala	Ile	Ser	Ser	Gly	Ser	Ile	Ile	Val															
			195				200					205																		
Ala	Thr	Val	Cys	Val	Ile	Ala	Ile	Ser	Tyr	Ile	Tyr	Ile	Leu	Ile	Thr															
			210				215				220																			
Ile	Leu	Lys	Met	His	Ser	Thr	Lys	Gly	Arg	His	Lys	Ala	Phe	Ser	Thr															
			225			230				235					240															
Cys	Thr	Ser	His	Leu	Thr	Ala	Val	Thr	Leu	Phe	Tyr	Gly	Thr	Ile	Thr															
				245				250					255																	
Phe	Ile	Tyr	Val	Met	Pro	Lys	Ser	Ser	Tyr	Ser	Thr	Asp	Gln	Asn	Lys															
			260					265					270																	
Val	Val	Ser	Val	Phe	Tyr	Thr	Val	Val	Ile	Pro	Met	Leu	Asn	Pro	Leu															
			275				280					285																		
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Ile	Lys	Gly	Ala	Leu	Lys	Arg	Glu															
			290			295					300																			
Leu	Arg	Ile	Lys	Ile	Phe	Ser																								
			305			310																								

<210> 60
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 60
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 actacagttt gtgctatttt atttcttgtg tttctaggaa tttatgttgt caccttaatg 120
 ggtaaatca gcataattgt attgatcaga agaagtcac atcttcatac acccatgtac 180
 attttcctct gccatttggc cttttagtagac attgggtact cctcatcagt cacacctgtc 240
 atgctcatga gcttcctaag gaaagaaacc tctctccctg ttgctgggtg tgtggcccag 300
 ctctgttctg tagtgacgtt tggtagcgcc gagtgcttcc tgctggctgc catggcctat 360
 gatcgctatg tggccatctg ctcacccctg ctctactcta cctgcatgtc ccctggagtc 420
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 ggctgcttat taagactgtc cttctgtggg ccaaataaag tcaatcactt tttctgtgac 540
 tattcaccac ttttgaagct tgcttgttcc catgatttta cttttgaaat aattccagct 600
 atctcttctg gatctatcat tgtggccact gtgtgtgtca tagccatata ctacatctat 660
 atcctcatca ccatactgaa gatgcactcc accaagggcc gccacaaggc cttctccacc 720
 tgcacctccc acctcactgc agtcactctg ttctatggga ccattacctt catttatgtg 780

atgcccaagt ccagctactc aactgaccag aacaagggtgg tgtctgtgtt ctacaccgtg 840
 gtgattccca tgttgaaccc cctgatctac agcctcagga acaaggagat taagggggct 900
 ctgaagagag agcttagaat aaaaatattt tcttga 936

<210> 61
 <211> 322
 <212> PRT
 <213> Homo sapiens

<400> 61
 Met Asn Ser Leu Lys Asp Gly Asn His Thr Ala Leu Thr Gly Phe Ile
 1 5 10 15
 Leu Leu Gly Leu Thr Asp Asp Pro Ile Leu Arg Val Ile Leu Phe Met
 20 25 30
 Ile Ile Leu Ser Gly Asn Leu Ser Ile Ile Ile Leu Ile Arg Ile Ser
 35 40 45
 Ser Gln Leu His His Pro Met Tyr Phe Phe Leu Ser His Leu Ala Phe
 50 55 60
 Ala Asp Met Ala Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn
 65 70 75 80
 Phe Leu Val Glu Arg Asn Thr Val Ser Tyr Leu Gly Cys Ala Ile Gln
 85 90 95
 Leu Gly Ser Ala Ala Phe Phe Ala Thr Val Glu Cys Val Leu Leu Ala
 100 105 110
 Ala Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Ser Pro Leu Leu Tyr
 115 120 125
 Ser Thr Lys Met Ser Thr Gln Val Ser Val Gln Leu Leu Leu Val Val
 130 135 140
 Tyr Ile Ala Gly Phe Leu Ile Ala Val Ser Tyr Thr Thr Ser Phe Tyr
 145 150 155 160
 Phe Leu Leu Phe Cys Gly Pro Asn Gln Val Asn His Phe Phe Cys Asp
 165 170 175
 Phe Ala Pro Leu Leu Glu Leu Ser Cys Ser Asp Ile Ser Val Ser Thr
 180 185 190
 Val Val Leu Ser Phe Ser Ser Gly Ser Ile Ile Val Val Thr Val Cys
 195 200 205
 Val Ile Ala Val Cys Tyr Ile Tyr Ile Leu Ile Thr Ile Leu Lys Met
 210 215 220
 Arg Ser Thr Glu Gly His His Lys Ala Phe Ser Thr Cys Thr Ser His
 225 230 235 240
 Leu Thr Val Val Thr Leu Phe Tyr Gly Thr Ile Thr Phe Ile Tyr Val
 245 250 255
 Met Pro Asn Phe Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val
 260 265 270

Leu Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
275 280 285

Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu Leu Val Arg Lys
290 295 300

Ile Leu Ser His Asp Ala Cys Tyr Phe Ser Arg Thr Ser Asn Asn Asp
305 310 315 320

Ile Thr

<210> 62
<211> 969
<212> DNA
<213> Homo sapiens

<400> 62
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ataattattc ttatcagaat ttcttctcag ctccatcatc ctatgtattt ctttctgagc 180
cacttggtct ttgctgacat ggcctattca tcttctgtca caccacaacat gcttgtaaac 240
ttcctgggtg agagaaatac agtctcctac cttggatgtg ccatccagct tgggtcagcg 300
gctttctttg caacagtcga atgcgtcctt ctggctgcca tggcctatga ccgctttgtg 360
gcaatttgca gtccactgct ttattcaacc aaaatgtcca cacaagtcag tgtccagcta 420
ctcttagtag ttacatagc tgggtttctc attgctgtct cctatactac ttcttctat 480
tttttactct tctgtggacc aaatcaagtc aatcattttt tctgtgattt cgctccctta 540
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tccatcattg tggtcactgt gtgtgtcata gccgtctgct acatctatat cctcatcacc 660
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ctcactgtgg ttaccctgtt ctatgggacc attaccttca tttatgtgat gcccaatttt 780
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attacatag 969

<210> 63
<211> 332
<212> PRT
<213> Homo sapiens

<400> 63
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20 25 30
Phe Ile Leu Val Gly Leu His His Pro Pro Gln Leu Gly Ala Pro Leu
35 40 45
Phe Leu Ala Phe Leu Val Ile Tyr Leu Leu Thr Val Ser Gly Asn Gly
50 55 60
Leu Ile Ile Leu Thr Val Leu Val Asp Ile Arg Leu His Arg Pro Met
65 70 75 80
Cys Leu Phe Leu Cys His Leu Ser Phe Leu Asp Met Thr Ile Ser Cys

85

90

95

Ala Ile Val Pro Lys Met Leu Ala Gly Phe Leu Leu Gly Ser Arg Ile
100 105 110

Ile Ser Phe Gly Gly Cys Val Ile Gln Leu Phe Ser Phe His Phe Leu
115 120 125

Gly Cys Thr Glu Cys Phe Leu Tyr Thr Leu Met Ala Tyr Asp Arg Phe
130 135 140

Leu Ala Ile Cys Lys Pro Leu His Tyr Ala Thr Ile Met Thr His Arg
145 150 155 160

Val Cys Asn Ser Leu Ala Leu Gly Thr Trp Leu Gly Gly Thr Ile His
165 170 175

Ser Leu Phe Gln Thr Ser Phe Val Phe Arg Leu Pro Phe Cys Gly Pro
180 185 190

Asn Arg Val Asp Tyr Ile Phe Cys Asp Ile Pro Ala Met Leu Arg Leu
195 200 205

Ala Cys Ala Asp Thr Ala Ile Asn Glu Leu Val Thr Phe Ala Asp Ile
210 215 220

Gly Phe Leu Ala Leu Thr Cys Phe Met Leu Ile Leu Thr Ser Tyr Gly
225 230 235 240

Tyr Ile Val Ala Ala Ile Leu Arg Ile Pro Ser Ala Asp Gly Arg Arg
245 250 255

Asn Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ile Val Tyr
260 265 270

Tyr Val Pro Cys Thr Phe Ile Tyr Leu Arg Pro Cys Ser Gln Glu Pro
275 280 285

Leu Asp Gly Val Val Ala Val Phe Tyr Thr Val Ile Thr Pro Leu Leu
290 295 300

Asn Ser Ile Ile Tyr Thr Leu Cys Asn Lys Glu Met Lys Ala Ala Leu
305 310 315 320

Gln Arg Leu Gly Gly His Lys Glu Val Gln Pro His
325 330

<210> 64

<211> 999

<212> DNA

<213> Homo sapiens

<400> 64

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ccaccacagc tgggagcgcc actcttctta gctttccttg tcatctatct cctcactgtt 180
tctggaaatg ggctcatcat cctcactgtc ttagtggaca tccggctcca tcgtcccatg 240
tgcttgttcc tgtgtcacct ctccttcttg gacatgacca tttcttgtgc tattgtcccc 300
aagatgctgg ctggctttct cttgggtagt aggattatct cctttggggg ctgtgtaatc 360
caactatttt ctttccattt cctgggctgt actgagtgtc tcctttacac actcatggct 420

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tatgaccgtt tccttgccat ttgtaagccc ttacactatg ctaccatcat gacccacaga 480
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acaagttttg tattccggct gcccttctgt ggccccaatc gggcgacta catcttctgt 600
gacattcctg ccatgctgcg tctagcctgc gccgatacgg ccatcaacga gctggtcacc 660
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tatattgtag ctgccatcct gcgaattccg tcagcagatg ggcgcgcgcaa tgccttctcc 780
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cagaggctag ggggccacaa ggaagtgcag cctcactga 999

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<210> 65
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 65

Met	Glu	Pro	Leu	Asn	Arg	Thr	Glu	Val	Ser	Glu	Phe	Phe	Leu	Lys	Gly
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Phe	Ser	Gly	Tyr	Pro	Ala	Leu	Glu	His	Leu	Leu	Phe	Pro	Leu	Cys	Ser
			20					25					30		
Ala	Met	Tyr	Leu	Val	Thr	Leu	Leu	Gly	Asn	Thr	Ala	Ile	Met	Ala	Val
			35					40				45			
Ser	Val	Leu	Asp	Ile	His	Leu	His	Thr	Pro	Val	Tyr	Phe	Phe	Leu	Gly
			50				55				60				
Asn	Leu	Ser	Thr	Leu	Asp	Ile	Cys	Tyr	Thr	Pro	Thr	Phe	Val	Pro	Leu
65					70					75					80
Met	Leu	Val	His	Leu	Leu	Ser	Ser	Arg	Lys	Thr	Ile	Ser	Phe	Ala	Val
				85					90					95	
Cys	Ala	Ile	Gln	Met	Cys	Leu	Ser	Leu	Ser	Thr	Gly	Ser	Thr	Glu	Cys
			100					105					110		
Leu	Leu	Leu	Ala	Ile	Thr	Ala	Tyr	Asp	Arg	Tyr	Leu	Ala	Ile	Cys	Gln
			115					120				125			
Pro	Leu	Arg	Tyr	His	Val	Leu	Met	Ser	His	Arg	Leu	Cys	Val	Leu	Leu
			130				135					140			
Met	Gly	Ala	Ala	Trp	Val	Leu	Cys	Leu	Leu	Lys	Ser	Val	Thr	Glu	Met
145					150					155					160
Val	Ile	Ser	Met	Arg	Leu	Pro	Phe	Cys	Gly	His	His	Val	Val	Ser	His
				165					170					175	
Phe	Thr	Cys	Lys	Ile	Leu	Ala	Val	Leu	Lys	Leu	Ala	Cys	Gly	Asn	Thr
			180					185					190		
Ser	Val	Ser	Glu	Asp	Phe	Leu	Leu	Ala	Gly	Ser	Ile	Leu	Leu	Leu	Pro
			195					200				205			
Val	Pro	Leu	Ala	Phe	Ile	Cys	Leu	Ser	Tyr	Leu	Leu	Ile	Leu	Ala	Thr
			210				215				220				
Ile	Leu	Arg	Val	Pro	Ser	Ala	Ala	Arg	Cys	Cys	Lys	Ala	Phe	Ser	Thr

65	70	75	80
Phe Leu Thr Val Met	Ala Tyr Asp Cys	Phe Val Ala Ile Cys	Arg Pro
85	90	95	
Leu His Tyr Pro Val	Ile Val Asn Pro	His Leu Cys Val	Phe Phe Val
100	105	110	
Leu Val Ser Phe Phe	Leu Ser Leu Leu	Asp Ser Gln Leu	His Ser Trp
115	120	125	
Ile Val Leu Gln Phe	Thr Phe Phe Lys	Asn Val Glu Ile	Ser Asn Phe
130	135	140	
Val Cys Glu Pro Ser	Gln Leu Leu Lys	Leu Ala Ser Tyr	Asp Ser Val
145	150	155	160
Ile Asn Ser Ile Phe	Ile Tyr Phe Asp	Asn Thr Met Phe	Gly Phe Leu
165	170	175	
Pro Ile Ser Gly Ile	Leu Leu Ser Tyr	Tyr Lys Ile Val	Pro Ser Ile
180	185	190	
Leu Arg Ile Ser Ser	Ser Asp Gly Lys	Tyr Lys Ala Phe	Ser Ala Cys
195	200	205	
Gly Cys His Leu Ala	Val Val Cys Leu	Phe Tyr Gly Thr	Gly Ile Gly
210	215	220	
Val Tyr Leu Thr Ser	Ala Val Ala Pro	Pro Leu Arg Asn	Gly Met Val
225	230	235	240
Ala Ser Val Met Tyr	Ala Val Val Thr	Pro Met Leu Asn	Pro Phe Ile
245	250	255	
Tyr Ser Leu Arg Asn	Arg Asp Ile Gln	Ser Ala Leu Trp	Arg Val Cys
260	265	270	
Asn Lys Thr Val Glu	Ser His Asp Leu	Phe His Pro Phe	Ser Cys Val
275	280	285	
Val Glu Lys Gly Gln	Pro His Ser Ile	Pro Thr Ser Ala	Asn Pro Ala
290	295	300	

Pro
305

<210> 68
 <211> 918
 <212> DNA
 <213> Homo sapiens

<400> 68
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 accttggcca cggttcccaa aatgattgtg gacatggggg cgcatagcaa agtcattctc 180
 tatgggggct gcctgacaca gatgtctttc ttggtacttt ttgcatgtat agtagacatg 240
 ttcttgactg tgatggctta tgactgcttt gtagccatct gtcgccctct gcactaccca 300
 gtcacgtgta atcctcacct ctgtgtcttc ttcggttttg tgtccttttt ccttagcctg 360
 ttggattccc agctgcacag ttggattgtg ttacaattca ctttcttcaa gaatgtggaa 420

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atccttttgt cttactataa aattgtcccc tccattctaa ggatttcatc atcagatggg 600
aagtacaaag ccttctcagc ctgtggctgt cacctggcag ttgtttgctt attttatgga 660
acaggcattg gcgtgtacct gacttcagct gtggcaccac ccctcaggaa tgggatggtg 720
gcgtcagtgga tgtacgctgt ggtcaccccc atgctgaacc ctttcatcta cagcctgaga 780
aacaggggaca ttcaaagtgc cctgtggagg gtgtgcaaca aaacagtcga atctcatgat 840
ctgttccatc ctttttcttg tgtggttgag aaagggaac cacattcaat ccctacatct 900
gcaaatacctg ccccttag                                     918

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<210> 69

<211> 319

<212> PRT

<213> Homo sapiens

<400> 69

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Met Glu Lys Ala Asn Glu Thr Ser Pro Val Met Gly Phe Val Leu Leu
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Arg Leu Ser Ala His Pro Glu Leu Glu Lys Thr Phe Phe Val Leu Ile
          20                      25                      30

Leu Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu
          35                      40                      45

Val Thr Ile Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu
          50                      55                      60

Gly Asn Leu Ser Phe Leu Asp Ile Cys Phe Thr Thr Ser Ser Val Pro
          65                      70                      75                      80

Leu Val Leu Asp Ser Phe Leu Thr Pro Gln Glu Thr Ile Ser Phe Ser
          85                      90                      95

Ala Cys Ala Val Gln Met Ala Leu Ser Phe Ala Met Ala Gly Thr Glu
          100                     105                     110

Cys Leu Leu Leu Ser Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
          115                     120                     125

Asn Pro Leu Arg Tyr Ser Val Ile Met Ser Lys Ala Ala Tyr Met Pro
          130                     135                     140

Met Ala Ala Ser Ser Trp Ala Ile Gly Gly Ala Ala Ser Val Val His
          145                     150                     155                     160

Thr Ser Leu Ala Ile Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn
          165                     170                     175

His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp
          180                     185                     190

Ile Ser Ile Asn Val Ile Ser Met Glu Val Thr Asn Val Ile Phe Leu
          195                     200                     205

Gly Val Pro Val Leu Phe Ile Ser Phe Ser Tyr Val Phe Ile Ile Thr
          210                     215                     220

Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Val Phe Ser
          225                     230                     235                     240

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Leu Leu Thr Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro
 85 90 95
 Leu His Tyr Pro Val Ile Met Asn Pro His Leu Gly Val Phe Leu Val
 100 105 110
 Leu Val Ser Phe Phe Leu Ser Leu Leu Asp Ser Gln Leu His Ser Trp
 115 120 125
 Ile Val Leu Gln Phe Thr Phe Phe Lys Asn Val Glu Ile Ser Asn Phe
 130 135 140
 Val Cys Asp Pro Ser Gln Leu Leu Asn Leu Ala Cys Ser Asp Ser Val
 145 150 155 160
 Ile Asn Ser Ile Phe Ile Tyr Leu Asp Ser Ile Met Phe Gly Phe Leu
 165 170 175
 Pro Ile Ser Gly Ile Leu Leu Ser Tyr Ala Asn Asn Val Pro Ser Ile
 180 185 190
 Leu Arg Ile Ser Ser Ser Asp Arg Lys Ser Lys Ala Phe Ser Thr Cys
 195 200 205
 Gly Ser His Leu Ala Val Val Cys Leu Phe Tyr Gly Thr Gly Ile Gly
 210 215 220
 Val Tyr Leu Thr Ser Ala Val Ser Pro Pro Pro Arg Asn Gly Val Val
 225 230 235 240
 Ala Ser Val Met Tyr Ala Val Val Thr Pro Met Leu Asn Pro Phe Ile
 245 250 255
 Tyr Ser Leu Arg Asn Arg Asp Ile Gln Ser Ala Leu Trp Arg Leu Arg
 260 265 270
 Ser Arg Thr Val Glu Ser His Asp Leu Leu Ser Gln Asp Leu Leu His
 275 280 285
 Pro Phe Ser Cys Val Gly Glu Lys Gly Gln Pro His
 290 295 300

<210> 72
 <211> 903
 <212> DNA
 <213> Homo sapiens

<400> 72
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 acctcggcca tggttcccaa gatgattgtg gacatgcagt cgcatagcag agtcatctct 180
 tatgcgggct gcctgacaca gatgtctttc tttgtccttt ttgcatgtat agaagacatg 240
 ctcttgacag tgatggccta tgaccgattt gtggccatct gtcaccccct gcactaccca 300
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 atcaatagca tattcatata tttagatagt attatgtttg gttttcttcc catttcaggg 540
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 aagtctaaag cttctctcac ctgtggctct cacctggcag ttgtttgctt attttatgga 660

acaggcattg gcgtgtacct gacttcagct gtgtcaccac cccccaggaa tgggtgtggtg 720
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 aatagggaca ttcaaagtgc cctgtggagg ctgocgagca gaacagtcga atctcatgat 840
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 taa 903

<210> 73
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 73

Met	Gly	Val	Lys	Asn	His	Ser	Thr	Val	Thr	Glu	Phe	Leu	Leu	Ser	Gly	1	5	10	15
Leu	Thr	Glu	Gln	Ala	Glu	Leu	Gln	Leu	Pro	Leu	Phe	Cys	Leu	Phe	Leu	20	25	30	
Gly	Ile	Tyr	Thr	Val	Thr	Val	Val	Gly	Asn	Leu	Ser	Met	Ile	Ser	Ile	35	40	45	
Ile	Arg	Leu	Asn	Arg	Gln	Leu	His	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Ser	50	55	60	
Ser	Leu	Ser	Phe	Leu	Asp	Phe	Cys	Tyr	Ser	Ser	Val	Ile	Thr	Pro	Lys	65	70	75	80
Met	Leu	Ser	Gly	Phe	Leu	Cys	Arg	Asp	Arg	Ser	Ile	Ser	Tyr	Ser	Gly	85	90	95	
Cys	Met	Ile	Gln	Leu	Phe	Phe	Phe	Cys	Val	Cys	Val	Ile	Ser	Glu	Cys	100	105	110	
Tyr	Met	Leu	Ala	Ala	Met	Ala	Cys	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Ser	115	120	125	
Pro	Leu	Leu	Tyr	Arg	Val	Ile	Met	Ser	Pro	Arg	Val	Cys	Ser	Leu	Leu	130	135	140	
Val	Ala	Ala	Val	Phe	Ser	Val	Gly	Phe	Thr	Asp	Ala	Val	Ile	His	Gly	145	150	155	160
Gly	Cys	Ile	Leu	Arg	Leu	Ser	Phe	Cys	Gly	Ser	Asn	Ile	Ile	Lys	His	165	170	175	
Tyr	Phe	Cys	Asp	Ile	Val	Pro	Leu	Ile	Lys	Leu	Ser	Cys	Ser	Ser	Thr	180	185	190	
Tyr	Ile	Asp	Glu	Leu	Leu	Ile	Phe	Val	Ile	Gly	Gly	Phe	Asn	Met	Val	195	200	205	
Ala	Thr	Ser	Leu	Thr	Ile	Ile	Ile	Ser	Tyr	Ala	Phe	Ile	Leu	Thr	Ser	210	215	220	
Ile	Leu	Arg	Ile	His	Ser	Lys	Lys	Gly	Arg	Cys	Lys	Ala	Phe	Ser	Thr	225	230	235	240
Cys	Ser	Ser	His	Leu	Thr	Ala	Val	Leu	Met	Phe	Tyr	Gly	Ser	Leu	Met	245	250	255	

Ser Met Tyr Leu Lys Pro Ala Ser Ser Ser Ser Leu Thr Gln Glu Lys
 260 265 270

Val Ser Ser Val Phe Tyr Thr Thr Val Ile Leu Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Asn Glu Val Arg Asn Ala Leu Met Lys Leu
 290 295 300

Leu Arg Arg Lys Ile Ser Leu Ser Pro Gly
 305 310

<210> 74
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 74
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 ggaaacctca gcatgatctc aattattagg ctgaatcgtc aacttcatac ccccatgtac 180
 tatttcctga gtagtttgtc ttttttagat ttctgctatt cttctgtcat taccctaaa 240
 atgctatcag ggtttttatg cagagataga tccatctcct attctggatg catgattcag 300
 ctgttttttt tctgtgtttg tgttatttct gaatgctaca tgctggcagc catggcctgc 360
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 gtcattggtg gatttaacat ggtggccaca agcctaacaa tcattatttc atatgctttt 660
 atcctcacca gcatcctgcy catccactct aaaaagggca ggtgcaaagc gtttagcacc 720
 tgtagctccc acctgacagc tgttcttatg ttttatgggt ctctgatgtc catgtatctc 780
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<210> 75
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 75
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 20 25 30
 Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45
 Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60
 Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu
 65 70 75 80
 Met Thr Leu Val Ser Pro Ser Gly Arg Thr Ile Ser Phe His Ser Cys
 85 90 95

Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe
 100 105 110
 Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
 115 120 125
 Leu Arg Tyr Thr Asn Met Met Thr Gly Arg Ser Cys Ala Leu Leu Ala
 130 135 140
 Thr Gly Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
 145 150 155 160
 Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
 165 170 175
 Phe Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190
 Ala Asn Glu Met Val Ile Phe Val Asn Ile Gly Leu Val Ala Ser Gly
 195 200 205
 Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220
 Leu Arg Ile Arg Thr Ser Glu Gly Arg His Arg Ala Phe Gln Thr Cys
 225 230 235 240
 Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Gly Pro Gly Leu Phe
 245 250 255
 Ile Tyr Leu Arg Pro Gly Ser Arg Asp Ala Leu His Gly Val Val Ala
 260 265 270
 Val Phe Tyr Thr Thr Leu Thr Pro Leu Phe Asn Pro Val Val Tyr Thr
 275 280 285
 Leu Arg Asn Lys Glu Val Lys Lys Ala Leu Leu Lys Leu Lys Asn Gly
 290 295 300
 Ser Val Phe Ala Gln Gly Glu
 305 310

<210> 76
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 76
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 ctcaccaacc tgtccttcat tgacatgtgg ttctccactg tcacgggtgcc caaaatgctg 240
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 aatattgggc tagtggcctc gggctgcttt gtccatgatg tgctgtccta tgtgtccatc 660
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gcctcccact gtatcggtgt cctttgcttc tttggccctg gtcttttcat ttacctgagg 780
ccaggctcca gggacgcctt gcatgggggt gtggccgttt tctacaccac gctgactcct 840
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ctgaaaaaatg ggtcagtatt tgctcagggt gaatag 936

<210> 77
<211> 323
<212> PRT
<213> Homo sapiens

<400> 77
Met Asn Pro Glu Asn Trp Thr Gln Val Thr Ser Phe Val Leu Leu Gly
1 5 10 15
Phe Pro Ser Ser His Leu Ile Gln Phe Leu Val Phe Leu Gly Leu Met
20 25 30
Val Thr Tyr Ile Val Thr Ala Thr Gly Lys Leu Leu Ile Ile Val Leu
35 40 45
Ser Trp Ile Asp Gln Arg Leu His Ile Gln Met Tyr Phe Phe Leu Arg
50 55 60
Asn Phe Ser Phe Leu Glu Leu Leu Leu Val Thr Val Val Val Pro Lys
65 70 75 80
Met Leu Val Val Ile Leu Thr Gly Asp His Thr Ile Ser Phe Val Ser
85 90 95
Cys Ile Ile Gln Ser Tyr Leu Tyr Phe Phe Leu Gly Thr Thr Asp Phe
100 105 110
Phe Leu Leu Ala Val Met Ser Leu Asp Arg Tyr Leu Ala Ile Cys Arg
115 120 125
Pro Leu Arg Tyr Glu Thr Leu Met Asn Gly His Val Cys Ser Gln Leu
130 135 140
Val Leu Ala Ser Trp Leu Ala Gly Phe Leu Trp Val Leu Cys Pro Thr
145 150 155 160
Val Leu Met Ala Ser Leu Pro Phe Cys Gly Pro Asn Gly Ile Asp His
165 170 175
Phe Phe Arg Asp Ser Trp Pro Leu Leu Arg Leu Ser Cys Gly Asp Thr
180 185 190
His Leu Leu Lys Leu Val Ala Phe Met Leu Ser Thr Leu Val Leu Leu
195 200 205
Gly Ser Leu Ala Leu Thr Ser Val Ser Tyr Ala Cys Ile Leu Ala Thr
210 215 220
Val Leu Arg Ala Pro Thr Ala Ala Glu Arg Arg Lys Ala Phe Ser Thr
225 230 235 240
Cys Ala Ser His Leu Thr Val Val Val Ile Ile Tyr Gly Ser Ser Ile
245 250 255
Phe Leu Tyr Ile Arg Met Ser Glu Ala Gln Ser Lys Leu Leu Asn Lys

260

265

270

Gly Ala Ser Val Leu Ser Cys Ile Ile Thr Pro Leu Leu Asn Pro Phe
 275 280 285

Ile Phe Thr Leu Arg Asn Asp Lys Val Gln Gln Ala Leu Arg Glu Ala
 290 295 300

Leu Gly Trp Pro Arg Leu Thr Ala Val Met Lys Leu Arg Val Thr Ser
 305 310 315 320

Gln Arg Lys

<210> 78

<211> 972

<212> DNA

<213> Homo sapiens

<400> 78

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cgtatgtcag aggtcagtc caaactgctc aacaaagggt cctccgtcct gagctgcac 840
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<210> 79

<211> 318

<212> PRT

<213> Homo sapiens

<400> 79

Met Asn Pro Ala Asn His Ser Gln Val Ala Gly Phe Val Leu Leu Gly
 1 5 10 15

Leu Ser Gln Val Trp Glu Leu Arg Phe Val Phe Phe Thr Val Phe Ser
 20 25 30

Ala Val Tyr Phe Met Thr Val Val Gly Asn Leu Leu Ile Val Val Ile
 35 40 45

Val Thr Ser Asp Pro His Leu His Thr Thr Met Tyr Phe Leu Leu Gly
 50 55 60

Asn Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Ile Thr Ala Pro Arg
 65 70 75 80

Met Leu Val Asp Leu Leu Ser Gly Asn Pro Thr Ile Ser Phe Gly Gly
 85 90 95
 Cys Leu Thr Gln Leu Phe Phe Phe His Phe Ile Gly Gly Ile Lys Ile
 100 105 110
 Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ile Ala Ile Ser Gln
 115 120 125
 Pro Leu His Tyr Thr Leu Ile Met Asn Gln Thr Val Cys Ala Leu Leu
 130 135 140
 Met Ala Ala Ser Trp Val Gly Gly Phe Ile His Ser Ile Val Gln Ile
 145 150 155 160
 Ala Leu Thr Ile Gln Leu Pro Phe Cys Gly Pro Asp Lys Leu Asp Asn
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Leu Ile Lys Leu Ala Cys Thr Asp Thr
 180 185 190
 Phe Val Leu Glu Leu Leu Met Val Ser Asn Asn Gly Leu Val Thr Leu
 195 200 205
 Met Cys Phe Leu Val Leu Leu Gly Ser Tyr Thr Ala Leu Leu Val Met
 210 215 220
 Leu Arg Ser His Ser Arg Glu Gly Arg Ser Lys Ala Leu Ser Thr Cys
 225 230 235 240
 Ala Ser His Ile Ala Val Val Thr Leu Ile Phe Val Pro Cys Ile Tyr
 245 250 255
 Val Tyr Thr Arg Pro Phe Arg Thr Phe Pro Met Asp Lys Ala Val Ser
 260 265 270
 Val Leu Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Ala Ile Tyr Thr
 275 280 285
 Leu Arg Asn Lys Glu Val Ile Met Ala Met Lys Lys Leu Trp Arg Arg
 290 295 300
 Lys Lys Asp Pro Ile Gly Pro Leu Glu His Arg Pro Leu His
 305 310 315

<210> 80
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 80
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 ggaaaccttc ttattgtggt catagtgacc tccgaccac acctgcacac aaccatgtat 180
 tttctcttgg gcaatctttc tttcctggac ttttgctact cttccatcac agcacctagg 240
 atgctgggtg acttgctctc aggcaacctt accatttcct ttgggtggatg cctgactcaa 300
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 gaccgctaca ttgccatttc ccagcccctg cactacacgc tcattatgaa tcagactgtc 420
 tgtgcactcc ttatggcagc ctctctgggtg gggggcttca tccactccat agtacagatt 480
 gcattgacta tccagctgcc attctgtggg cctgacaagc tggacaactt ttattgtgat 540

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gtgcctcagc tgatcaaatt ggccctgcaca gatacctttg tcttagagct tttaatggtg 600
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ctgctagtca tgctccgaag ccactcacgg gagggccgca gcaaggccct gtctacctgt 720
gcctctcaca ttgctgtggt gaccttaatc tttgtgcctt gcactctacgt ctatacaagg 780
ccttttcgga cattcccat ggacaaggcc gtctctgtgc tatacacaat tgtcaccccc 840
atgctgaatc ctgccatcta taccctgaga aacaaggaag tgatcatggc catgaagaag 900
ctgtggagga ggaaaaagga ccctattggt cccctggagc acagaccctt acattag 957

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<210> 81
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 81
 Met Gln Lys Pro Gln Leu Leu Val Pro Ile Ile Ala Thr Ser Asn Gly
 1 5 10 15
 Asn Leu Val His Ala Ala Tyr Phe Leu Leu Val Gly Ile Pro Gly Leu
 20 25 30
 Gly Pro Thr Ile His Phe Trp Leu Ala Phe Pro Leu Cys Phe Met Tyr
 35 40 45
 Ala Leu Ala Thr Leu Gly Asn Leu Thr Ile Val Leu Ile Ile Arg Val
 50 55 60
 Glu Arg Arg Leu His Glu Pro Met Tyr Leu Phe Leu Ala Met Leu Ser
 65 70 75 80
 Thr Ile Asp Leu Val Leu Ser Ser Ile Thr Met Pro Lys Met Ala Ser
 85 90 95
 Leu Phe Leu Met Gly Ile Gln Glu Ile Glu Phe Asn Ile Cys Leu Ala
 100 105 110
 Gln Met Phe Leu Ile His Ala Leu Ser Ala Val Glu Ser Ala Val Leu
 115 120 125
 Leu Ala Met Ala Phe Asp Arg Phe Val Ala Ile Cys His Pro Leu Arg
 130 135 140
 His Ala Ser Val Leu Thr Gly Cys Thr Val Ala Lys Ile Gly Leu Ser
 145 150 155 160
 Ala Leu Thr Arg Gly Phe Val Phe Phe Phe Pro Leu Pro Phe Ile Leu
 165 170 175
 Lys Trp Leu Ser Tyr Cys Gln Thr His Thr Val Thr His Ser Phe Cys
 180 185 190
 Leu His Gln Asp Ile Met Lys Leu Ser Cys Thr Asp Thr Arg Val Asn
 195 200 205
 Val Val Tyr Gly Leu Phe Ile Ile Leu Ser Val Met Gly Val Asp Ser
 210 215 220
 Leu Phe Ile Gly Phe Ser Tyr Ile Leu Ile Leu Trp Ala Val Leu Glu
 225 230 235 240
 Leu Ser Ser Arg Arg Ala Ala Leu Lys Ala Phe Asn Thr Cys Ile Ser

245	250	255
His Leu Cys Ala Val Leu Val Phe Tyr Val Pro Leu Ile Gly Leu Ser		
260	265	270
Val Val His Arg Leu Gly Gly Pro Thr Ser Leu Leu His Val Val Met		
275	280	285
Ala Asn Thr Tyr Leu Leu Leu Pro Pro Val Val Asn Pro Leu Val Tyr		
290	295	300
Gly Ala Lys Thr Lys Glu Ile Cys Ser Arg Val Leu Cys Met Phe Ser		
305	310	315
		320
Gln Gly Gly Lys		

<210> 82
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 82
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 gcagcatact tccttttggg ggggtatccct ggcttggggc ctaccataca cttttggctg 120
 gctttccac tgtgttttat gtatgccttg gccaccctgg gtaacctgac cattgtcctc 180
 atcattcgtg tggagaggcg actgcatgag cccatgtacc tcttcctggc catgctttcc 240
 actattgacc tagtcctctc ctctatcacc atgccaaga tggccagtct tttcctgatg 300
 ggcattcagg agatcgagtt caacatttgc ctggcccaga tgttccttat ccatgctctg 360
 tcagccgtgg agtcagctgt cctgctggcc atggcctttg accgctttgt ggccatttgc 420
 caccattgc gccatgcttc tgtgctgaca ggggtgtactg tggccaagat tggactatct 480
 gccctgacca gggggtttgt attcttcttc ccactgccct tcctcctcaa gtggttgtcc 540
 tactgccaaa cacatactgt cacacactcc ttctgtctgc accaagatat tatgaagctg 600
 tcctgtactg acaccagggg caatgtgggt tatggactct tcctcctcct ctcagtcctg 660
 ggtgtggact ctctcttcat tggcttctca tatatcctca tcctgtgggc tgttttggag 720
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 ccccttgtct atggagccaa gaccaaagag atctgttcaa gggctcctctg tatgttctca 960
 caaggtggca agtga 975

<210> 83
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 83
 Met Ser Ser Cys Asn Phe Thr His Ala Thr Phe Val Leu Ile Gly Ile
 1 5 10 15
 Pro Gly Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser
 20 25 30
 Met Tyr Val Val Ala Met Phe Gly Asn Cys Ile Val Val Phe Ile Val
 35 40 45
 Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met
 50 55 60

Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile
 65 70 75 80
 Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Phe Glu Ala Cys
 85 90 95
 Leu Thr Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr
 100 105 110
 Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125
 Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly
 130 135 140
 Ile Val Ala Val Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu
 145 150 155 160
 Leu Ile Lys Arg Leu Ala Phe Cys His Ser Asn Val Leu Ser His Ser
 165 170 175
 Tyr Cys Val His Gln Asp Val Met Lys Leu Ala Tyr Ala Asp Thr Leu
 180 185 190
 Pro Asn Val Val Tyr Gly Leu Thr Ala Ile Leu Leu Val Met Gly Val
 195 200 205
 Asp Val Met Phe Ile Ser Leu Ser Tyr Phe Leu Ile Ile Arg Thr Val
 210 215 220
 Leu Gln Leu Pro Ser Lys Ser Glu Arg Ala Lys Ala Phe Gly Thr Cys
 225 230 235 240
 Val Ser His Ile Gly Val Val Leu Ala Phe Tyr Val Pro Leu Ile Gly
 245 250 255
 Leu Ser Val Val His Arg Phe Gly Asn Ser Leu His Pro Ile Val Arg
 260 265 270
 Val Val Met Gly Asp Ile Tyr Leu Leu Leu Pro Pro Val Ile Asn Pro
 275 280 285
 Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile Arg Thr Arg Val Leu Ala
 290 295 300
 Met Phe Lys Ile Ser Cys Asp Lys Asp Leu Gln Ala Val Gly Gly Lys
 305 310 315 320

<210> 84
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 84
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 aactgcatcg tgggtcttcac cgtaaggacg gaacgcagcc tgcacgctcc gatgtacctc 180
 tttctctgca tgcttgacgc cattgacctg gccttatcca catccaccat gcctaagatc 240
 cttgcccttt tctgggttg ttcccgagag attagctttg aggcctgtct taccagatg 300
 ttctttattc atgccctctc agccattgaa tccaccatcc tgctggccat ggcctttgac 360

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cgttatgtgg ccactctgcc cccactgcgc catgctgcag tgctcaacaa tacagtaaca 420
gccagattg gcacgtggc tgggtccgc ggatccctct ttttttccc actgcctctg 480
ctgatcaagc ggctggcctt ctgccactcc aatgtcctct cgcactccta ttgtgtccac 540
caggatgtaa tgaagttggc ctatgcagac actttgcccc atgtgggata tggcttact 600
gccattctgc tgggtcatggg cgtggacgta atgttcatct ccttgtccta ttttctgata 660
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gtgtcacaca ttgggtgtgt actcgccttc tatgtgccac ttattggcct ctcatgggta 780
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tga

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<210> 85
 <211> 314
 <212> PRT
 <213> Homo sapiens

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<400> 85
Met Leu Pro Ser Asn Ile Thr Ser Thr His Pro Ala Val Phe Leu Leu
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Val Gly Ile Pro Gly Leu Glu His Leu His Ala Trp Ile Ser Ile Pro
      20              25              30

Phe Cys Phe Ala Tyr Thr Leu Ala Leu Leu Gly Asn Cys Thr Leu Leu
      35              40              45

Phe Ile Ile Gln Ala Asp Ala Leu His Glu Pro Met Tyr Leu Phe
      50              55              60

Leu Ala Met Leu Ala Thr Ile Asp Leu Val Leu Ser Ser Thr Thr Leu
      65              70              75              80

Pro Lys Met Leu Ala Ile Phe Trp Phe Arg Asp Gln Glu Ile Asn Phe
      85              90              95

Phe Ala Cys Leu Val Gln Met Phe Phe Leu His Ser Phe Ser Ile Met
      100              105              110

Glu Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
      115              120              125

Cys Lys Pro Leu His Tyr Thr Thr Val Leu Thr Gly Ser Leu Ile Thr
      130              135              140

Lys Ile Gly Met Ala Ala Val Ala Arg Ala Val Thr Leu Met Thr Pro
      145              150              155              160

Leu Pro Phe Leu Leu Arg Arg Phe His Tyr Cys Arg Gly Pro Val Ile
      165              170              175

Ala His Cys Tyr Cys Glu His Met Ala Val Val Arg Leu Ala Cys Gly
      180              185              190

Asp Thr Ser Phe Asn Asn Ile Tyr Gly Ile Ala Val Ala Met Phe Ser
      195              200              205

Val Val Leu Asp Leu Leu Phe Val Ile Leu Ser Tyr Val Phe Ile Leu
      210              215              220

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Gln Ala Val Leu Gln Leu Ala Ser Gln Glu Ala Arg Tyr Lys Ala Phe
 225 230 235 240
 Gly Thr Cys Val Ser His Ile Gly Ala Ile Leu Ser Thr Tyr Thr Pro
 245 250 255
 Val Val Ile Ser Ser Val Met His Arg Val Ala Arg His Ala Ala Pro
 260 265 270
 Arg Val His Ile Leu Leu Ala Ile Phe Tyr Leu Leu Phe Pro Pro Met
 275 280 285
 Val Asn Pro Ile Ile Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Tyr
 290 295 300
 Val Leu Ser Leu Phe Gln Arg Lys Asn Met
 305 310

<210> 86
 <211> 1400
 <212> DNA
 <213> Homo sapiens

<400> 86
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 ctgtagaagg tatatataga aggtgaagaa gccctgtaaa aattgacaag gagatttcca 120
 ggagccatgc ttccctctaa tatcaacctca acacatccag ctgtcttttt gttggttagga 180
 attcctggtt tggaaacacct gcatgcctgg atctccatcc ccttctgctt tgcttatact 240
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 actgggtccc tcatcaccaa gattggcatg gctgctgtgg cccgggctgt gacactaatg 600
 actccactcc ctttctgct cagacgcttc cactactgcc gaggcccagt gattgcccatt 660
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 atctcttcag tcatgcaccg tgtagcccgc catgctgccc ctctgtgtcca cataactcct 960
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 aagcagattc gtgagtatgt gctcagtcta ttccagagaa agaacatgta gatggatagt 1080
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 aacctctcaa agtggtattg taatctgggt gaaagacagt aggaccttta ttggctgaga 1380
 ttggcccaaa cagctgagtc 1400

<210> 87
 <211> 384
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (68)
 <223> Any amino acid

<400> 87

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Ile	Arg	Glu	Asp	Asp	Asp	Ser	Asp	Phe	Lys	Asn	Phe	Ile	Gly	Gln	Ile	
			20					25					30			
Gln	Gly	Leu	Ser	Gly	Asn	Pro	His	Ser	Thr	Thr	Ser	Arg	Met	Tyr	Phe	
		35					40					45				
Leu	Cys	Phe	Cys	Thr	Ser	Leu	Leu	Gly	Phe	Lys	Val	His	Trp	Val	Ser	
	50					55					60					
Arg	Leu	Ile	Xaa	Lys	Leu	Tyr	Met	Ala	Ser	Pro	Asn	Asn	Asp	Ser	Thr	
65					70					75					80	
Ala	Pro	Val	Ser	Glu	Phe	Leu	Leu	Ile	Cys	Phe	Pro	Asn	Phe	Gln	Ser	
				85					90					95		
Trp	Gln	His	Trp	Leu	Ser	Leu	Pro	Leu	Ser	Leu	Leu	Phe	Leu	Leu	Ala	
			100					105					110			
Met	Gly	Ala	Asn	Thr	Thr	Leu	Leu	Ile	Thr	Ile	Gln	Leu	Glu	Ala	Ser	
		115					120					125				
Leu	His	Gln	Pro	Leu	Tyr	Tyr	Leu	Leu	Ser	Leu	Leu	Ser	Leu	Leu	Asp	
	130					135					140					
Ile	Val	Leu	Cys	Leu	Thr	Val	Ile	Pro	Lys	Val	Leu	Ala	Ile	Phe	Trp	
145					150					155					160	
Phe	Asp	Leu	Arg	Ser	Ile	Ser	Phe	Pro	Ala	Cys	Phe	Leu	Gln	Met	Phe	
				165					170					175		
Ile	Met	Asn	Ser	Phe	Leu	Thr	Met	Glu	Ser	Cys	Thr	Phe	Met	Val	Met	
			180					185					190			
Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr	Pro	Ser	
		195					200					205				
Ile	Ile	Thr	Asp	Gln	Phe	Val	Ala	Arg	Ala	Val	Val	Phe	Val	Ile	Ala	
	210					215					220					
Arg	Asn	Ala	Phe	Val	Ser	Leu	Pro	Val	Pro	Met	Leu	Ser	Ala	Arg	Leu	
225					230					235					240	
Arg	Tyr	Cys	Ala	Gly	Asn	Ile	Ile	Lys	Asn	Cys	Ile	Cys	Ser	Asn	Leu	
				245					250					255		
Ser	Val	Ser	Lys	Leu	Ser	Cys	Asp	Asp	Ile	Thr	Phe	Asn	Gln	Leu	Tyr	
			260					265					270			
Gln	Phe	Val	Ala	Gly	Trp	Thr	Leu	Leu	Gly	Ser	Asp	Leu	Ile	Leu	Ile	
		275					280					285				
Val	Ile	Ser	Tyr	Ser	Phe	Ile	Leu	Lys	Val	Val	Leu	Arg	Ile	Lys	Ala	
	290					295					300					
Glu	Gly	Ala	Val	Ala	Lys	Ala	Leu	Ser	Thr	Cys	Gly	Ser	His	Phe	Ile	
305					310					315					320	

Leu Ile Leu Phe Phe Ser Thr Val Leu Leu Val Leu Val Ile Thr Asn
325 330 335

Leu Ala Arg Lys Arg Ile Pro Pro Asp Val Pro Ile Leu Leu Asn Ile
340 345 350

Leu His His Leu Ile Pro Pro Ala Leu Asn Pro Ile Val Tyr Gly Val
355 360 365

Arg Thr Lys Glu Ile Lys Gln Gly Ile Gln Asn Leu Leu Lys Arg Leu
370 375 380

<210> 88
<211> 1155
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> (203)
<223> a, t, c, or g

<400> 88
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tctactacgt ctagaatgta ctttttatgt ttctgtactt ctctactagg ttttaaggta 180
cactgggtct ccagattgat cangaaactt tacatggcat ctcccaacaa tgactccact 240
gccccagtct ctgaattcct cctcatctgc ttccccaact tccagagctg gcagcactgg 300
ttgtctctgc ccctcagcct tctcttcttc ctggccatgg gagctaacac caccctcctg 360
atcaccatcc agctggaggc ctctctgcac cagccccgtg actacctgct cagcctcctc 420
tccctgctgg acatcgtgct ctgcctcacc gtcattccca aggtcctggc catcttctgg 480
tttgacctca ggtagtcctg cttcccagcc tgcttctctc agatgttcat catgaacagt 540
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tgccatccat tgagataccc gtctatcatc actgaccagt ttgtggctag ggccgtgggc 660
tttgattatag cccggaatgc ctttgtttct cttcctgttc ccatgctttc tgccaggctc 720
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ctctcttgtg atgacatcac tttcaatcag ctctaccagt ttgtggcagg ctggactctg 840
ttgggctctg atcttattcct tattgttatc tcctattctt ttatattgaa agttgtgctt 900
aggatcaagg ccgaggggtg tgtggccaag gccttgagca cgtgtgggtc ccacttcatc 960
ctcatcctct tcttcagcac agtcctgctg gttctgggtc tcactaacct ggccaggaag 1020
agaattcctc cagatgtccc catcctgtct aacatcctgc accacctcat tccccagct 1080
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ctgaagaggt tgtaa 1155

<210> 89
<211> 314
<212> PRT
<213> Homo sapiens

<400> 89
Met Ser Ala Ser Asn Ile Thr Leu Thr His Pro Thr Ala Phe Leu Leu
1 5 10 15

Val Gly Ile Pro Gly Leu Glu His Leu His Ile Trp Ile Ser Ile Pro
20 25 30

Phe Cys Leu Ala Tyr Thr Leu Ala Leu Leu Gly Asn Cys Thr Leu Leu
35 40 45

Leu Ile Ile Gln Ala Asp Ala Ala Leu His Glu Pro Met Tyr Leu Phe
 50 55 60
 Leu Ala Met Leu Ala Ala Ile Asp Leu Val Leu Ser Ser Ser Ala Leu
 65 70 75 80
 Pro Lys Met Leu Ala Ile Phe Trp Phe Arg Asp Arg Glu Ile Asn Phe
 85 90 95
 Phe Ala Cys Leu Ala Gln Met Phe Phe Leu His Ser Phe Ser Ile Met
 100 105 110
 Glu Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
 115 120 125
 Cys Lys Pro Leu His Tyr Thr Lys Val Leu Thr Gly Ser Leu Ile Thr
 130 135 140
 Lys Ile Gly Met Ala Ala Val Ala Arg Ala Val Thr Leu Met Thr Pro
 145 150 155 160
 Leu Pro Phe Leu Leu Arg Cys Phe His Tyr Cys Arg Gly Pro Val Ile
 165 170 175
 Ala His Cys Tyr Cys Glu His Met Ala Val Val Arg Leu Ala Cys Gly
 180 185 190
 Asp Thr Ser Phe Asn Asn Ile Tyr Gly Ile Ala Val Ala Met Phe Ile
 195 200 205
 Val Val Leu Asp Leu Leu Leu Val Ile Leu Ser Tyr Ile Phe Ile Leu
 210 215 220
 Gln Ala Val Leu Leu Leu Ala Ser Gln Glu Ala Arg Tyr Lys Ala Phe
 225 230 235 240
 Gly Thr Cys Val Ser His Ile Gly Ala Ile Leu Ala Phe Tyr Thr Thr
 245 250 255
 Val Val Ile Ser Ser Val Met His Arg Val Ala Arg His Ala Ala Pro
 260 265 270
 His Val His Ile Leu Leu Ala Asn Phe Tyr Leu Leu Phe Pro Pro Met
 275 280 285
 Val Asn Pro Ile Ile Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Ser
 290 295 300
 Ile Leu Gly Val Phe Pro Arg Lys Asp Met
 305 310

<210> 90

<211> 945

<212> DNA

<213> Homo sapiens

<400> 90

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 ggcttggaac acctgcacat ctggatctcc atccctttct gcttagcata tacactggcc 120
 ctgcttggaactgcactct ccttctcatc atccaggctg atgcagccct ccatgaaccc 180

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atgtacctct ttctggccat gttggcagcc atcgacctgg tcctttcctc ctcagcactg 240
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gcccagatgt tcttccttca ctccttctcc atcatggagt cagcagtgtc gctggccatg 360
gcctttgacc gctatgtggc tatctgcaag ccactgcact acaccaaggt cctgactggg 420
tccctcatca ccaagattgg catggctgct gtggcccggt ctgtgacact aatgactcca 480
ctcccccttc tgctgagatg tttccactac tgccgaggcc cagtgatcgc tcaactgtac 540
tgtgaacaca tggctgtggt gaggtggcg tgtggggaca ctactgtcaa caatatctat 600
ggcatcgctg tggccatgtt tattgtggtg ttggacctgc tccttggtat cctgtcttat 660
atctttattc ttcaggcagt tctactgctt gcctctcagg aggcccgcta caaggcattt 720
gggacatgtg tctctcatat aggtgccatc ttagccttct acacaactgt ggtcatctct 780
tcagtcacatg accgtgtagc ccgccatgct gcccctcatg tccacatcct ccttgccaat 840
ttctatctgc tcttcccacc catggtcaat cccataatct atggtgtcaa gaccaagcaa 900
atccgtgaga gcactctggg agtattccca agaaaggata tgtag 945

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<210> 91
 <211> 318
 <212> PRT
 <213> Homo sapiens

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<400> 91
Met Met Val Asp Pro Asn Gly Asn Glu Ser Ser Ala Thr Tyr Phe Ile
  1             5             10             15

Leu Ile Gly Leu Pro Gly Leu Glu Glu Ala Gln Phe Trp Leu Ala Phe
      20             25             30

Pro Leu Cys Ser Leu Tyr Leu Ile Ala Val Leu Gly Asn Leu Thr Ile
      35             40             45

Ile Tyr Ile Val Arg Thr Glu His Ser Leu His Glu Pro Met Tyr Ile
      50             55             60

Phe Leu Cys Met Leu Ser Gly Ile Asp Ile Leu Ile Ser Thr Ser Ser
      65             70             75             80

Met Pro Lys Met Leu Ala Ile Phe Trp Phe Asn Ser Thr Thr Ile Gln
      85             90             95

Phe Asp Ala Cys Leu Leu Gln Met Phe Ala Ile His Ser Leu Ser Gly
      100            105            110

Met Glu Ser Thr Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala
      115            120            125

Ile Cys His Pro Leu Arg His Ala Thr Val Leu Thr Leu Pro Arg Val
      130            135            140

Thr Lys Ile Gly Val Ala Ala Val Val Arg Gly Ala Ala Leu Met Ala
      145            150            155            160

Pro Leu Pro Val Phe Ile Lys Gln Leu Pro Phe Cys Arg Ser Asn Ile
      165            170            175

Leu Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys
      180            185            190

Asp Asp Ile Arg Val Asn Val Val Tyr Gly Leu Ile Val Ile Ile Ser
      195            200            205

Ala Ile Gly Leu Asp Ser Leu Leu Ile Ser Phe Ser Tyr Leu Leu Ile

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210 215 220
 Leu Lys Thr Val Leu Gly Leu Thr Arg Glu Ala Gln Ala Lys Ala Phe
 225 230 235 240
 Gly Thr Cys Val Ser His Val Cys Ala Val Phe Ile Phe Tyr Val Pro
 245 250 255
 Phe Ile Gly Leu Ser Met Val His Arg Phe Ser Lys Arg Arg Asp Ser
 260 265 270
 Pro Leu Pro Val Ile Leu Ala Asn Ile Tyr Leu Leu Val Pro Pro Val
 275 280 285
 Leu Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Glu Ile Arg Gln Arg
 290 295 300
 Ile Leu Arg Leu Phe His Val Ala Thr His Ala Ser Glu Pro
 305 310 315

<210> 92
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 92
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 cctgggttag aagaggctca gttctggttg gccttcccat tgtgctccct ctaccttatt 120
 gctgtgctag gtaacttgac aatcatctac attgtgcgga ctgagcacag cctgcatgag 180
 cccatgtata tatttctttg catgctttca ggcattgaca tctcatctc cacctcatcc 240
 atgccccaaa tgctggccat cttctgggttc aattccacta ccatccagtt tgatgcttgt 300
 ctgctacaga tggttgccat ccactcctta tctggcatgg aatccacagt gctgctggcc 360
 atggcttttg accgctatgt ggccatctgt caccactgc gccatgccac agtacttacg 420
 ttgcctcgtg tcacccaaat tgggtgtggt gctgtggtgc ggggggctgc actgatggca 480
 ccccttctctg tcttcatcaa gcagctgcc ttctgccgct ccaatacct tcccattcc 540
 tactgcctac accaagatgt catgaagctg gcctgtgatg atatccgggt caatgtcgtc 600
 tatggcctta tcgtcatcat ctccgccatt ggccctggact cacttctcat ctcccttctca 660
 tatctgctta ttcttaagac tgtgttgggc ttgacacgtg aagcccaggc caaggcattt 720
 ggcacttgcg tctctcatgt gtgtgctgtg ttcatattct atgtaccttt cattggattg 780
 tccatggtgc atcgctttag caagcggcgt gactctccgc tgcccgtcat cttggccaat 840
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<210> 93
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 93
 Met Leu Thr Phe His Asn Val Cys Ser Val Pro Ser Ser Phe Trp Leu
 1 5 10 15
 Thr Gly Ile Pro Gly Leu Glu Ser Leu His Val Trp Leu Ser Ile Pro
 20 25 30
 Phe Gly Ser Met Tyr Leu Val Ala Val Val Gly Asn Val Thr Ile Leu
 35 40 45
 Ala Val Val Lys Ile Glu Arg Ser Leu His Gln Pro Met Tyr Phe Phe

50	55	60
Leu Cys Met Leu Ala Ala Ile Asp Leu Val Leu Ser Thr Ser Thr Ile 65 70 75 80		
Pro Lys Leu Leu Gly Ile Phe Trp Phe Gly Ala Cys Asp Ile Gly Leu 85 90 95		
Asp Ala Cys Leu Gly Gln Met Phe Leu Ile His Cys Phe Ala Thr Val 100 105 110		
Glu Ser Gly Ile Phe Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile 115 120 125		
Cys Asn Pro Leu Arg His Ser Met Val Leu Thr Tyr Thr Val Val Gly 130 135 140		
Arg Leu Gly Leu Val Ser Leu Leu Arg Gly Val Leu Tyr Ile Gly Pro 145 150 155 160		
Leu Pro Leu Met Ile Arg Leu Arg Leu Pro Leu Tyr Lys Thr His Val 165 170 175		
Ile Ser His Ser Tyr Cys Glu His Met Ala Val Val Ala Leu Thr Cys 180 185 190		
Gly Asp Ser Arg Val Asn Asn Val Tyr Gly Leu Ser Ile Gly Phe Leu 195 200 205		
Val Leu Ile Leu Asp Ser Val Ala Ile Ala Ala Ser Tyr Val Met Ile 210 215 220		
Phe Arg Ala Val Met Gly Leu Ala Thr Pro Glu Ala Arg Leu Lys Thr 225 230 235 240		
Leu Gly Thr Cys Ala Ser His Leu Cys Ala Ile Leu Ile Phe Tyr Val 245 250 255		
Pro Ile Ala Val Ser Ser Leu Ile His Arg Phe Gly Gln Cys Val Pro 260 265 270		
Pro Pro Val His Thr Leu Leu Ala Asn Phe Tyr Leu Leu Ile Pro Pro 275 280 285		
Ile Leu Asn Pro Ile Val Tyr Ala Val Arg Thr Lys Gln Ile Arg Glu 290 295 300		
Ser Leu Leu Gln Ile Pro Arg Ile Glu Met Lys Ile Arg 305 310 315		

<210> 94
 <211> 954
 <212> DNA
 <213> Homo sapiens

<400> 94
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 gggctggagt ccctacacgt ctggctctcc atcccccttg gctccatgta cctgggtggct 120
 gtgggtggga atgtgacat cctggctgtg gtaaagatag aacgcagcct gcaccagccc 180
 atgtactttt tcttgtgcat gttggctgcc attgacctgg ttctgtctac ttccactata 240

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cccaaaacttc tgggaatctt ctggttcggt gcttgtgaca ttggcctgga cgcttgcttg 300
ggccaaatgt tccttatcca ctgctttgcc actgttgagt caggcatctt ccttgccatg 360
gcttttgatc gctacgtggc catctgcaac ccactacgtc atagcatggg gctcacttat 420
acagtgggtgg gtcgtttggg gcttgtttct ctctccggg gtgttctcta cattggacct 480
ctgcctctga tgatccgcct gcggctgccc cttataaaaa cccatgttat ctcccactcc 540
tactgtgagc acatggctgt agttgccttg acatgtggcg acagcagggt caataatgtc 600
tatgggctga gcatcggctt tctggtgttg atcctggact cagtggctat tgctgcatcc 660
tatgtgatga ttttcagggc cgtgatgggg ttagccactc ctgaggctag gcttaaaacc 720
ctggggacat gcgcttctca cctctgtgcc atcctgatct tttatgttcc cattgctgtt 780
tcttccctga ttcaccgatt tggtcagtgt gtgcctctc cagtccacac tctgctggcc 840
aacttctatc tcctcattcc tccaatcctc aatcccattg tctatgctgt tcgcaccaag 900
cagatccgag agagccttct ccaaatacca aggatagaaa tgaagattag atga 954

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<210> 95
 <211> 319
 <212> PRT
 <213> Homo sapiens

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<400> 95
Met Asn Leu Asp Ser Phe Phe Ser Phe Leu Leu Lys Ser Leu Ile Met
  1                      5                      10                      15

Ala Leu Ser Asn Ser Ser Trp Arg Leu Pro Gln Pro Ser Phe Phe Leu
      20                      25                      30

Val Gly Ile Pro Gly Leu Glu Glu Ser Gln His Trp Ile Ala Leu Pro
      35                      40                      45

Leu Gly Ile Leu Tyr Leu Leu Ala Leu Val Gly Asn Val Thr Ile Leu
      50                      55                      60

Phe Ile Ile Trp Met Asp Pro Ser Leu His Gln Ser Met Tyr Leu Phe
      65                      70                      75                      80

Leu Ser Met Leu Ala Ala Ile Asp Leu Val Val Ala Ser Ser Thr Ala
      85                      90                      95

Pro Lys Ala Leu Ala Val Leu Leu Val Arg Ala Gln Glu Ile Gly Tyr
      100                     105                     110

Thr Val Cys Leu Ile Gln Met Phe Phe Thr His Ala Phe Ser Ser Met
      115                     120                     125

Glu Ser Gly Val Leu Val Ala Met Ala Leu Asp Arg Tyr Val Ala Ile
      130                     135                     140

Cys His Pro Leu His His Ser Thr Ile Leu His Pro Gly Val Ile Gly
      145                     150                     155                     160

His Ile Gly Met Val Val Leu Val Arg Gly Leu Leu Leu Leu Ile Pro
      165                     170                     175

Phe Leu Ile Leu Leu Arg Lys Leu Ile Phe Cys Gln Ala Thr Ile Ile
      180                     185                     190

Gly His Ala Tyr Cys Glu His Met Ala Val Val Lys Leu Ala Cys Ser
      195                     200                     205

Glu Thr Thr Val Asn Arg Ala Tyr Gly Leu Thr Val Ala Leu Leu Val
      210                     215                     220

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Val Gly Leu Asp Val Leu Ala Ile Gly Val Ser Tyr Ala His Ile Leu
 225 230 235 240

Gln Ala Val Leu Lys Val Pro Gly Asn Glu Ala Arg Leu Lys Ala Phe
 245 250 255

Ser Thr Cys Gly Ser His Val Cys Val Ile Leu Val Phe Tyr Ile Pro
 260 265 270

Gly Met Phe Ser Phe Leu Thr His Arg Phe Gly His His Val Pro His
 275 280 285

His Val His Val Leu Leu Ala Ile Leu Tyr Arg Leu Val Pro Pro Ala
 290 295 300

Leu Asn Pro Leu Val Tyr Arg Val Lys Thr Gln Lys Ile His Gln
 305 310 315

<210> 96
 <211> 960
 <212> DNA
 <213> Homo sapiens

<400> 96
 atgaatttgg attctttttt ctctttcctc ctcaagtcac tgataatggc acttagcaat 60
 tccagctgga ggctacccca gccttctttt ttcttggtag gaattccggg tttagaggaa 120
 agccagcact ggatcgcaact gcccctgggc atcctttacc tccttgctct agtgggcaat 180
 gttaccattc tcttcatcat ctggatggac ccacacctgc accaatctat gtacctcttc 240
 ctgtccatgc tagctgccat cgacctggtt gtggcctcct ccaactgcacc caaagccctt 300
 gcagtgtctc tgggttcgtgc ccaagagatt gggttacactg tctgcctgat ccagatgttc 360
 ttcacccatg cattctcctc catggagtca ggggtacttg tggccatggc tctggatcgc 420
 tatgtagcca tttgtcacc cttgcacat tccacaatcc tgcacccagg ggtcataggg 480
 cacatcgga tgggtggtgct ggtgcgggga ttactactcc tcatccctt cctcattctg 540
 ttgcgaaaac ttatcttctg ccaagccacc atcataggcc atgcctattg tgaacatatg 600
 gctgttgatg aacttgccctg ctcaagaaacc acagtcaatc gagcttatgg gctgactgtg 660
 gccttgcttg tgggtgggct ggatgtcctg gccattgggt tttcctatgc ccacattctc 720
 caggcagtg tgaaggtacc aggaatagag gcccgactta aggcctttag cacatgtggc 780
 tctcatgttt gtgtcatcct ggtcttctat atcccgggaa tgttctcctt cctcactcac 840
 cgctttgggc atcatgtacc ccatcacgtc catgttcttc tggccatact gtatcgctt 900
 gtgccacctg cactcaatcc tcttgtctat aggggtgaaga ccagaagat ccaccagtga 960

<210> 97
 <211> 350
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Cys Gln Gln Ile Leu Arg Asp Cys Ile Leu Leu Ile His His Leu
 1 5 10 15

Cys Ile Asn Arg Lys Lys Val Ser Leu Val Met Leu Gly Pro Ala Tyr
 20 25 30

Asn His Thr Met Glu Thr Pro Ala Ser Phe Leu Leu Val Gly Ile Pro
 35 40 45

Gly Leu Gln Ser Ser His Leu Trp Leu Ala Ile Ser Leu Ser Ala Met
 50 55 60

Tyr Ile Ile Ala Leu Leu Gly Asn Thr Ile Ile Val Thr Ala Ile Trp
 65 70 75 80
 Met Asp Ser Thr Arg His Glu Pro Met Tyr Cys Phe Leu Cys Val Leu
 85 90 95
 Ala Ala Val Asp Ile Val Met Ala Ser Ser Val Val Pro Lys Met Val
 100 105 110
 Ser Ile Phe Cys Ser Gly Asp Ser Ser Ile Ser Phe Ser Ala Cys Phe
 115 120 125
 Thr Gln Met Phe Phe Val His Leu Ala Thr Ala Val Glu Thr Gly Leu
 130 135 140
 Leu Leu Thr Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
 145 150 155 160
 His Tyr Lys Arg Ile Leu Thr Pro Gln Val Met Leu Gly Met Ser Met
 165 170 175
 Ala Ile Thr Ile Arg Ala Ile Ile Ala Ile Thr Pro Leu Ser Trp Met
 180 185 190
 Val Ser His Leu Pro Phe Cys Gly Ser Asn Val Val Val His Ser Tyr
 195 200 205
 Cys Glu His Ile Ala Leu Ala Arg Leu Ala Cys Ala Asp Pro Val Pro
 210 215 220
 Ser Ser Leu Tyr Ser Leu Ile Gly Ser Ser Leu Met Val Gly Ser Asp
 225 230 235 240
 Val Ala Phe Ile Ala Ala Ser Tyr Ile Leu Ile Leu Lys Ala Val Phe
 245 250 255
 Gly Leu Ser Ser Lys Thr Ala Gln Leu Lys Ala Leu Ser Thr Cys Gly
 260 265 270
 Ser His Val Gly Val Met Ala Leu Tyr Tyr Leu Pro Gly Met Ala Ser
 275 280 285
 Ile Tyr Ala Ala Trp Leu Gly Gln Asp Val Val Pro Leu His Thr Gln
 290 295 300
 Val Leu Leu Ala Asp Leu Tyr Val Ile Ile Pro Ala Thr Leu Asn Pro
 305 310 315 320
 Ile Ile Tyr Gly Met Arg Thr Lys Gln Leu Arg Glu Arg Ile Trp Ser
 325 330 335
 Tyr Leu Met His Val Leu Phe Asp His Ser Asn Leu Gly Ser
 340 345 350

<210> 98
 <211> 1053
 <212> DNA
 <213> Homo sapiens

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<400> 98
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aaaaaagtct cacttgtgat gctgggtcca gcttataacc acacaatgga aaccctgcc 120
tccttcctcc ttgtgggtat cccaggactg caatcttcac atctttggct ggctatctca 180
ctgagtgccca tgtacatcat agccctgtta ggaaacacca tcatcgtgac tgcaatctgg 240
atggattcca ctggcatga gcccatgtat tgctttctgt gtgttctggc tgctgtggac 300
attgttatgg cctcctcggt ggtacccaag atgggtgagca tcttctgctc aggagacagc 360
tcaatcagct ttagtgcttg tttcactcag atgttttttg tccacttagc cacagctgtg 420
gagacggggc tgctgctgac catggctttt gaccgctatg tagccatctg caagcctcta 480
cactacaaga gaattctcac gcctcaagtg atgctgggaa tgagtatggc catcaccatc 540
agagctatca tagccataac tccactgagt tggatgggtga gtcactacc tttctgtggc 600
tccaatgtgg ttgtccactc ctactgtgag cacatagctt tggccagggt agcatgtgct 660
gaccccgtag ccagcagctc ctacagctct attggttctt ctcttatggg gggctctgat 720
gtggccttca ttgctgcctc ctatatctta attctcaagg cagtatttgg tctctcctca 780
aagactgctc agttgaaagc attaagcaca tgtggctccc atgtgggggt tatggctttg 840
tactatctac ctgggatggc atccatctat gcggcctggg tggggcagga tgtagtgccc 900
ttgcacaccc aagtctgct agctgacctg tacgtgatca tcccagccac cttaaattccc 960
atcatctatg gcatgaggac caaacaactg cgggagagaa tatggagtta tctgatgcac 1020
gtcctctttg accattccaa cctgggttca tga 1053

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<210> 99
<211> 324
<212> PRT
<213> Homo sapiens

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<400> 99
Met Leu Gly Pro Ala Tyr Asn His Thr Met Glu Thr Pro Ala Ser Phe
 1             5             10             15

Leu Leu Val Gly Ile Pro Gly Leu Gln Ser Ser His Leu Trp Leu Ala
      20             25             30

Ile Ser Leu Ser Ala Met Tyr Ile Thr Ala Leu Leu Gly Asn Thr Leu
      35             40             45

Ile Val Thr Ala Ile Trp Met Asp Ser Thr Arg His Glu Pro Met Tyr
      50             55             60

Cys Phe Leu Cys Val Leu Ala Ala Val Asp Ile Val Met Ala Ser Ser
      65             70             75             80

Val Val Pro Lys Met Val Ser Ile Phe Cys Ser Gly Asp Ser Ser Ile
      85             90             95

Ser Phe Ser Ala Cys Phe Thr Gln Met Phe Phe Val His Leu Ala Thr
      100            105            110

Ala Val Glu Thr Gly Leu Leu Leu Thr Met Ala Phe Asp Arg Tyr Val
      115            120            125

Ala Ile Cys Lys Pro Leu His Tyr Lys Arg Ile Leu Thr Pro Gln Val
      130            135            140

Met Leu Gly Met Ser Met Ala Val Thr Ile Arg Ala Val Thr Phe Met
      145            150            155            160

Thr Pro Leu Ser Trp Met Met Asn His Leu Pro Phe Cys Gly Ser Asn
      165            170            175

Val Val Val His Ser Tyr Cys Lys His Ile Ala Leu Ala Arg Leu Ala

```

180	185	190
Cys Ala Asp Pro Val Pro Ser Ser Leu Tyr Ser Leu Ile Gly Ser Ser		
195	200	205
Leu Met Val Gly Ser Asp Val Ala Phe Ile Ala Ala Ser Tyr Ile Leu		
210	215	220
Ile Leu Arg Ala Val Phe Asp Leu Ser Ser Lys Thr Ala Gln Leu Lys		
225	230	235
Ala Leu Ser Thr Cys Gly Ser His Val Gly Val Met Ala Leu Tyr Tyr		
245	250	255
Leu Pro Gly Met Ala Ser Ile Tyr Ala Ala Trp Leu Gly Gln Asp Ile		
260	265	270
Val Pro Leu His Thr Gln Val Leu Leu Ala Asp Leu Tyr Val Ile Ile		
275	280	285
Pro Ala Thr Leu Asn Pro Ile Ile Tyr Gly Met Arg Thr Lys Gln Leu		
290	295	300
Leu Glu Gly Ile Trp Ser Tyr Leu Met His Phe Leu Phe Asp His Ser		
305	310	315
		320

Asn Leu Gly Ser

<210> 100
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 100

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atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120
acagccctgt	taggaaacac	cctcatcgtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgttctg	gctgctgtgg	acattgttat	ggcctcctcc	240
gtggtaccga	agatgggtgag	catcttctgc	tcgggagaca	gctccatcag	ctttagtgtc	300
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accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccgtcacca	tcagagctgt	cacattcatg	480
actccactga	gttgatgat	gaatcatcta	cctttctgtg	gctccaatgt	ggttgtccac	540
tcctactgta	agcacatagc	tttgccagg	ttagcatgtg	ctgaccccg	gcccagcagt	600
ctctacagtc	tgattgggtc	ctctcttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcag	ggcagtattt	gatctctcct	caaagactgc	tcagttgaaa	720
gcattaagca	catgtggctc	ccatgtgggg	gttatggctt	tgtactatct	acctgggatg	780
gcatccatct	atgcggcctg	gttggggcag	gatatagtg	ccttgccacac	ccaagtgtg	840
ctagctgacc	tgtacgtgat	catcccagcc	actttaaatc	ccatcatcta	tggcatgagg	900
accaaacaat	tgctggaggg	aatatggagt	tatctgatgc	acttcctctt	tgaccactcc	960
aacctgggtt	catga					975

<210> 101
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 101

Met	Ser	Asp	Ser	Asn	Leu	Ser	Asp	Asn	His	Leu	Pro	Asp	Thr	Phe	Phe	1	5	10	15
Leu	Thr	Gly	Ile	Pro	Gly	Leu	Glu	Ala	Ala	His	Phe	Trp	Ile	Ala	Ile	20	25	30	
Pro	Phe	Cys	Ala	Met	Tyr	Leu	Val	Ala	Leu	Val	Gly	Asn	Ala	Ala	Leu	35	40	45	
Ile	Leu	Val	Ile	Ala	Met	Asp	Asn	Ala	Leu	His	Ala	Pro	Met	Tyr	Leu	50	55	60	
Phe	Leu	Cys	Leu	Leu	Ser	Leu	Thr	Asp	Leu	Ala	Leu	Ser	Ser	Thr	Thr	65	70	75	80
Val	Pro	Lys	Met	Leu	Ala	Ile	Leu	Trp	Leu	His	Ala	Gly	Glu	Ile	Ser	85	90	95	
Phe	Gly	Gly	Cys	Leu	Ala	Gln	Met	Phe	Cys	Val	His	Ser	Ile	Tyr	Ala	100	105	110	
Leu	Glu	Ser	Ser	Ile	Leu	Leu	Ala	Met	Ala	Phe	Asp	Arg	Tyr	Val	Ala	115	120	125	
Ile	Cys	Asn	Pro	Leu	Arg	Tyr	Thr	Thr	Ile	Leu	Asn	His	Ala	Val	Ile	130	135	140	
Gly	Arg	Ile	Gly	Phe	Val	Gly	Leu	Phe	Arg	Ser	Val	Ala	Ile	Val	Ser	145	150	155	160
Pro	Phe	Ile	Phe	Leu	Leu	Arg	Arg	Leu	Pro	Tyr	Cys	Gly	His	Arg	Val	165	170	175	
Met	Thr	His	Thr	Tyr	Cys	Glu	His	Met	Gly	Ile	Ala	Arg	Leu	Ala	Cys	180	185	190	
Ala	Asn	Ile	Thr	Val	Asn	Ile	Val	Tyr	Gly	Leu	Thr	Val	Ala	Leu	Leu	195	200	205	
Ala	Met	Gly	Leu	Asp	Ser	Ile	Leu	Ile	Ala	Ile	Ser	Tyr	Gly	Phe	Ile	210	215	220	
Leu	His	Ala	Val	Phe	His	Leu	Pro	Ser	His	Asp	Ala	Gln	His	Lys	Ala	225	230	235	240
Leu	Ser	Thr	Cys	Gly	Ser	His	Ile	Gly	Ile	Ile	Leu	Val	Phe	Tyr	Ile	245	250	255	
Pro	Ala	Phe	Phe	Ser	Phe	Leu	Thr	His	Arg	Phe	Gly	His	His	Glu	Val	260	265	270	
Pro	Lys	His	Val	His	Ile	Phe	Leu	Ala	Asn	Leu	Tyr	Val	Leu	Val	Pro	275	280	285	
Pro	Val	Leu	Asn	Pro	Ile	Leu	Tyr	Gly	Ala	Arg	Thr	Lys	Glu	Ile	Arg	290	295	300	
Ser	Arg	Leu	Leu	Lys	Leu	Leu	His	Leu	Gly	Lys	Thr	Ser	Ile	305	310	315			

<210> 102
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 102
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 gcaactggtg gaaatgctgc cctcatcctg gtcattgcca tggacaatgc tcttcatgca 180
 cctatgtacc tcttcctctg ccttctctca ctcacagacc tggctctcag ttctaccact 240
 gtgcccaga tgctggccat tttgtggctc catgctgggtg agatttcctt tgggtggatgc 300
 ctggcccaga tgttttgtgt ccattctatc tatgctctgg agtcctcgat tctacttgcc 360
 atggcctttg ataggtatgt ggctatctgt aacccattaa ggtatacaac cattctcaac 420
 catgctgtca taggcagaat tggctttgtt gggctattcc gtagtgtggc tattgtctcc 480
 cccttcactc tcttgctgag gcgactcccc tactgtgggtc accgtgtcat gacacacaca 540
 tactgtgagc atatgggcat cgcccgactg gcctgtgcca acatcactgt caatattgtc 600
 tatgggctaa ctgtggctct gctggccatg ggactggatt ccattctcat tgccatttcc 660
 tatggcttta tcctccatgc agtctttcac cttccatctc atgatgcca gcacaaagct 720
 ctgagtacct gtggctccca cattggcatc atcctgggtt tctacatccc tgccttcttc 780
 tccttctca cccaccgctt tggtcaccac gaagtcccca agcatgtgca catctttctg 840
 gctaactctc atgtgctggt gcctcctgta ctcaatccta ttctctatgg agctagaacc 900
 aaggagattc ggagtcgact tctaaaactg cttcacctgg ggaagacttc aatatga 957

<210> 103
 <211> 326
 <212> PRT
 <213> Homo sapiens

<400> 103
 Met Ser Phe Gln Val Thr Tyr Met Phe Tyr Leu His Trp Thr Met Glu
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 Lys Ser Asn Asn Ser Thr Leu Phe Ile Leu Leu Gly Phe Ser Gln Asn
 20 25 30
 Lys Asn Ile Glu Val Leu Cys Phe Val Leu Phe Leu Phe Cys Tyr Ile
 35 40 45
 Ala Ile Trp Met Gly Asn Leu Leu Ile Met Ile Ser Ile Thr Cys Thr
 50 55 60
 Gln Leu Ile His Gln Pro Met Tyr Phe Phe Leu Asn Tyr Leu Ser Leu
 65 70 75 80
 Ser Asp Leu Cys Tyr Thr Ser Thr Val Thr Pro Lys Leu Met Val Asp
 85 90 95
 Leu Leu Ala Glu Arg Lys Thr Ile Ser Tyr Asn Asn Cys Met Ile Gln
 100 105 110
 Leu Phe Thr Thr His Phe Phe Gly Gly Ile Glu Ile Phe Ile Leu Thr
 115 120 125
 Gly Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr
 130 135 140
 Thr Ile Ile Met Ser Arg Gln Lys Cys Asn Thr Ile Ile Ile Val Cys
 145 150 155 160
 Cys Thr Gly Gly Phe Ile His Ser Ala Ser Gln Phe Leu Leu Thr Ile

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aagttgtcat caggtttggga tatatacagg aatccactga agaacaagac tgaagtcacc 120
atgtttatat tgacaggctt cacagatgat tttgagctgc aagtcttcct atttttacta 180
ttttttgcaa tctatctctt taccttgata ggcaatttag ggctgggtgt gttgggtcatt 240
gaggattcct ggctccacaa ccccatgtat tattttctta gtgttttatc attcttggat 300
gcttgctatt ctacagttgt cactccaaaa atgttgggtca atttcctggc aaaaaataaa 360
tccatttcat ttatcggatg tgcaacacag atgcttcttt ttgttacttt tggaactaca 420
gaatgttttc tcttggctgc aatggcttat gatcactatg tagccatcta caaccctctc 480
ctgtattcag tgagcatgtc acccagagtc tatgtgccac tcatcactgc ttcctacgtt 540
gctggcattt tacatgctac tatacatata gtggctacat ttagcctgtc cttctgtgga 600
tccaatgaaa ttaggcatgt cttttgtgat atgcctcctc tccttgctat ttcttgttct 660
gacactcaca caaaccagct tctactcttc tactttgtgg gttctattga gatagtcact 720
atcctgattg tcctcatttc ctgtgatttc attctgttgt ccattctgaa gatgcattct 780
gctaagggaa ggcaaaaggc cttctctaca tgtggctctc acctaactgg agtgacaatt 840
tatcatggaa caattctcgt cagttatatg agaccaagtt ccagctatgc ttcagaccat 900
gacatcatag tgtcaatatt ttacacaatt gtgattccca agttgaatcc catcatctat 960
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tga 1023

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<210> 131
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 131

Met	Gly	Arg	Arg	Asn	Asn	Thr	Asn	Val	Pro	Asp	Phe	Ile	Leu	Thr	Gly	1	5	10	15
Leu	Ser	Asp	Ser	Glu	Glu	Val	Gln	Met	Ala	Leu	Phe	Ile	Leu	Phe	Leu	20	25	30	
Leu	Ile	Tyr	Leu	Ile	Thr	Met	Leu	Gly	Asn	Val	Gly	Met	Ile	Leu	Ile	35	40	45	
Ile	Arg	Leu	Asp	Leu	Gln	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Thr	50	55	60	
His	Leu	Ser	Phe	Ile	Asp	Leu	Ser	Tyr	Ser	Thr	Val	Ile	Thr	Pro	Lys	65	70	75	80
Thr	Leu	Ala	Asn	Leu	Leu	Thr	Ser	Asn	Tyr	Ile	Ser	Phe	Met	Gly	Cys	85	90	95	
Phe	Ala	Gln	Met	Phe	Phe	Phe	Val	Phe	Leu	Gly	Ala	Ala	Glu	Cys	Phe	100	105	110	
Leu	Leu	Ser	Ser	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Ser	Pro	115	120	125	
Leu	Arg	Tyr	Pro	Val	Ile	Met	Ser	Lys	Arg	Leu	Cys	Cys	Ala	Leu	Val	130	135	140	
Thr	Gly	Pro	Tyr	Val	Ile	Ser	Phe	Ile	Asn	Ser	Phe	Val	Asn	Val	Val	145	150	155	160
Trp	Met	Ser	Arg	Leu	His	Phe	Cys	Asp	Ser	Asn	Val	Val	Arg	His	Phe	165	170	175	
Phe	Cys	Asp	Thr	Ser	Pro	Ile	Leu	Ala	Leu	Ser	Cys	Met	Asp	Thr	Tyr	180	185	190	

Asp Ile Glu Ile Met Ile His Ile Leu Ala Gly Ser Thr Leu Met Val
 195 200 205
 Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr Ile
 210 215 220
 Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Leu Ser Thr Cys
 225 230 235 240
 Ala Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile Phe
 245 250 255
 Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln Val
 260 265 270
 Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Leu Ile Arg Val Met
 290 295 300
 Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 132
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 132
 atgggtagaa gaaataaacac aaatgtgcct gacttcatcc ttacgggact gtcagattct 60
 gaagagggtcc agatggccct ctttataacta tttctcctga tatacctaata tactatgctg 120
 ggcaatgtgg ggatgatatt gataatccgc ctggacctcc agcttcacac tcccattgat 180
 tttttcctta ctacttgctc atttattgac ctgagttact caactgtcat cacacctaaa 240
 accttagcga acttactgac ttccaactat atttccttca tgggctgctt tgcccagatg 300
 ttcttttttg tcttcttggg agctgctgaa tgttttcttc tctcatcaat ggcctatgat 360
 cgctacgtag ctatctgcag tcctctacgt taccaggtta ttatgtccaa aaggctgtgt 420
 tgcgctcttg tcaactgggc ctatgtgatt agctttatca actcctttgt caatgtgggt 480
 tggatgagca gactgcattt ctgcgactca aatgtagttc gtcacttttt ctgcgacacg 540
 tctccaattt tagctctgtc ctgcatggac acatacgaca ttgaaatcat gatacacatt 600
 ttagctgggt ccaccctgat ggtgtccctt atcacaatat ctgcatccta tgtgtccatt 660
 ctctctacca tcctgaaaat taattccact tcaggaaagc agaaagcttt gtctacttgt 720
 gcctctcatc tcttgggagt caccatcttt tatggaacta tgattttttac ttatttaaaa 780
 ccaagaaagt cttattcttt gggaagggat caagtggctt ctgtttttta tactattgtg 840
 attcccatgc tgaatccact catttatagt ctagaaaca aagaagttaa aaatgctctc 900
 attagagtca tgcagagaag acaggactcc aggttaa 936

<210> 133
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 133
 Met Ala Pro Glu Asn Phe Thr Arg Val Thr Glu Phe Ile Leu Thr Gly
 1 5 10 15
 Val Ser Ser Cys Pro Glu Leu Gln Ile Pro Leu Phe Leu Val Phe Leu
 20 25 30

Val	Leu	Tyr	Gly	Leu	Thr	Met	Ala	Gly	Asn	Leu	Gly	Ile	Ile	Thr	Leu	35	40	45
Thr	Ser	Val	Asp	Ser	Arg	Leu	Gln	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Gln	50	55	60
His	Leu	Ala	Leu	Ile	Asn	Leu	Gly	Asn	Ser	Thr	Val	Ile	Ala	Pro	Lys	65	70	75
Met	Leu	Ile	Asn	Phe	Leu	Val	Lys	Lys	Lys	Thr	Thr	Ser	Phe	Tyr	Glu	85	90	95
Cys	Ala	Thr	Gln	Leu	Gly	Gly	Phe	Leu	Phe	Phe	Ile	Val	Ser	Glu	Val	100	105	110
Ile	Met	Leu	Ala	Leu	Met	Ala	Cys	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	115	120	125
Pro	Leu	Leu	Tyr	Met	Val	Val	Val	Ser	Arg	Arg	Leu	Cys	Leu	Leu	Leu	130	135	140
Val	Ser	Leu	Thr	Tyr	Leu	Tyr	Gly	Phe	Ser	Thr	Ala	Ile	Val	Val	Ser	145	150	155
Ser	Tyr	Val	Phe	Ser	Val	Ser	Tyr	Cys	Ser	Ser	Asn	Ile	Ile	Asn	His	165	170	175
Phe	Tyr	Cys	Asp	Asn	Val	Pro	Leu	Leu	Ala	Leu	Ser	Cys	Ser	Asp	Thr	180	185	190
Tyr	Leu	Pro	Glu	Thr	Val	Val	Phe	Ile	Ser	Ala	Ala	Thr	Asn	Val	Val	195	200	205
Gly	Ser	Leu	Ile	Ile	Val	Leu	Val	Ser	Tyr	Phe	Asn	Ile	Val	Leu	Ser	210	215	220
Ile	Leu	Lys	Ile	Cys	Ser	Ser	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Ser	Thr	225	230	235
Cys	Ala	Ser	His	Met	Met	Ala	Val	Thr	Ile	Phe	Tyr	Gly	Thr	Leu	Leu	245	250	255
Phe	Met	Tyr	Val	Gln	Pro	Arg	Ser	Asn	His	Ser	Leu	Asp	Thr	Asp	Asp	260	265	270
Lys	Met	Ala	Ser	Val	Phe	Tyr	Thr	Leu	Val	Ile	Pro	Met	Leu	Asn	Pro	275	280	285
Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys	Thr	Ala	Leu	Gln	Arg	290	295	300
Phe	Met	Thr	Asn	Leu	Cys	Tyr	Ser	Phe	Lys	Thr	Met					305	310	315

<210> 134

<211> 951

<212> DNA

<213> Homo sapiens

<400> 134


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gggaacctgg gcatcatcac cctcaccagt gttgactctc gacttcaaac ccccatgtac 180
tttttcctgc aacatctggc tctcattaat cttggtaact ctactgtcat tgcccctaaa 240
atgctgatta acttttttagt aaagaagaaa actacctcat tctatgaatg tgccacccaa 300
ctgggagggg tcttgttctt tattgtatcg gaggtaatca tgctggcttt gatggcctgt 360
gaccgctatg tggctatttg taacctctcg ctgtacatgg tgggtgggtgc tcggcggtgc 420
tgctcctgc tgggtctccct cacatacctc tatggctttt ctacagctat tgtgggtttca 480
tcttatgtat tctctgtgtc ttattgctct tctaataata tcaatcattt ttactgtgat 540
aatgttcctc tgtttagcatt atcttgctct gatacttact taccagaaac agttgtcttt 600
atatctgcag caacaaatgt gggttggtcc ttgattatag ttctagtatc ttatttcaat 660
attgttttgt ctatttttaa aatatgttca tcagaaggaa ggaaaaaagc cttttctacc 720
tgtgcttcac atatgatggc agtcacaatt ttttatggga cattgctatt catgtatgtg 780
cagccccgaa gtaaccattc attggatact gatgataaga tggcttctgt gttttacacg 840
ttggtaattc ctatgctgaa tcccttgatc tacagcctga ggaataagga tgtgaagact 900
gctctacaga gattcatgac aaatctgtgc tattccttta aaacaatgta a 951

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<210> 135
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 135

Met	Asn	His	Val	Val	Lys	His	Asn	His	Thr	Ala	Val	Thr	Lys	Val	Thr
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Glu	Phe	Ile	Leu	Met	Gly	Ile	Thr	Asp	Asn	Pro	Gly	Leu	Gln	Ala	Pro
			20					25					30		
Leu	Phe	Gly	Leu	Phe	Leu	Ile	Ile	Tyr	Leu	Val	Thr	Val	Ile	Gly	Asn
		35					40					45			
Leu	Gly	Met	Val	Ile	Leu	Thr	Tyr	Leu	Asp	Ser	Lys	Leu	His	Thr	Pro
	50					55					60				
Met	Tyr	Phe	Phe	Leu	Arg	His	Leu	Ser	Ile	Thr	Asp	Leu	Gly	Tyr	Ser
65					70					75					80
Thr	Val	Ile	Ala	Pro	Lys	Met	Leu	Val	Asn	Phe	Ile	Val	His	Lys	Asn
				85					90					95	
Thr	Ile	Ser	Tyr	Asn	Trp	Tyr	Ala	Thr	Gln	Leu	Ala	Phe	Phe	Glu	Ile
		100					105						110		
Phe	Ile	Ile	Ser	Glu	Leu	Phe	Ile	Leu	Ser	Ala	Met	Ala	Tyr	Asp	Arg
	115						120					125			
Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu	Leu	Tyr	Val	Ile	Ile	Met	Ala	Glu
	130					135					140				
Lys	Val	Leu	Trp	Val	Leu	Val	Ile	Val	Pro	Tyr	Leu	Tyr	Ser	Thr	Phe
145					150				155						160
Val	Ser	Leu	Phe	Leu	Thr	Ile	Lys	Leu	Phe	Lys	Leu	Ser	Phe	Cys	Gly
			165					170						175	
Ser	Asn	Ile	Ile	Ser	Tyr	Phe	Tyr	Cys	Asp	Cys	Ile	Pro	Leu	Met	Ser
		180						185					190		
Ile	Leu	Cys	Ser	Asp	Thr	Asn	Glu	Leu	Glu	Leu	Ile	Ile	Leu	Ile	Phe

195	200	205
Ser Gly Cys Asn Leu Leu Phe Ser Leu Ser Ile Val Leu Ile Ser Tyr		
210	215	220
Met Phe Ile Leu Val Ala Ile Leu Arg Met Asn Ser Arg Lys Gly Arg		
225	230	235 240
Tyr Lys Ala Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Ile Met		
	245	250 255
Phe Tyr Gly Thr Leu Leu Phe Ile Tyr Leu Gln Pro Lys Ser Ser His		
	260	265 270
Thr Leu Ala Ile Asp Lys Met Ala Ser Val Phe Tyr Thr Leu Leu Ile		
	275	280 285
Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys		
	290	295 300
Asp Ala Leu Lys Arg Thr Leu Thr Asn Arg Phe Lys Ile Pro Ile		
305	310	315

<210> 136
 <211> 960
 <212> DNA
 <213> Homo sapiens

<400> 136
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 atgggggatta cagacaaccc tgggctgcag gctccactgt ttggactctt cctcatcata 120
 tatctgggtca cagtgatagg caatctgggc atgggttatct tgacctactt ggactccaag 180
 ctacacacccc ccatgtactt tttccttaga catttgtcaa tcaactgatct tggttactcc 240
 actgtcattg ccccgaagat gttagtaaac ttcatagtgc acaaaaacac aatttcttac 300
 aattgggtatg ccaactcagct agcattcttt gagattttca tcatctctga gctctttatt 360
 ctatcagcaa tggcctatga tcgctacgta gccatctgta aacctcttct gtacgtgatc 420
 atcatggcag agaaagtact ttgggtgctg gtaattgttc cctatctcta tagcacgttt 480
 gtgtcactat ttctcacaat taagttattt aaactgtcct tctgtggctc aaacataatc 540
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 ttagaattaa taattttgat cttctcaggc tgtaatttgc tcttctccct ctcaattggt 660
 ctcatatcct acatgtttat tctagtggcc attctcagaa tgaactcaag gaaagggagg 720
 tacaaagcct tctccacctg tagctctcat ctgacagtgg tgatcatgtt ctatgggaca 780
 ttgttatttta tttacttgca acccaagtc agtcatactt tggctattga taaaatggcc 840
 tcagtgtttt ataccctgtt gattcctatg ctgaatccgt tgatctacag cctaaggaac 900
 aaagaagtaa aagatgctct aaagagaact ttaaccaatc gattcaaaat tcccatttaa 960

<210> 137
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 137
 Met Glu Gln His Asn Leu Thr Thr Val Asn Glu Phe Ile Leu Thr Gly
 1 5 10 15
 Ile Thr Asp Ile Ala Glu Leu Gln Ala Pro Leu Phe Ala Leu Phe Leu
 20 25 30
 Met Ile Tyr Val Ile Ser Val Met Gly Asn Leu Gly Met Ile Val Leu

35					40					45					
Thr	Lys	Leu	Asp	Ser	Arg	Leu	Gln	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Arg
	50					55					60				
His	Leu	Ala	Phe	Met	Asp	Leu	Gly	Tyr	Ser	Thr	Thr	Val	Gly	Pro	Lys
65					70					75					80
Met	Leu	Val	Asn	Phe	Val	Val	Asp	Lys	Asn	Ile	Ile	Ser	Tyr	Tyr	Phe
				85					90					95	
Cys	Ala	Thr	Gln	Leu	Ala	Phe	Phe	Leu	Val	Phe	Ile	Gly	Ser	Glu	Leu
			100					105					110		
Phe	Ile	Leu	Ser	Ala	Met	Ser	Tyr	Asp	Leu	Tyr	Val	Ala	Ile	Cys	Asn
		115					120					125			
Pro	Leu	Leu	Tyr	Thr	Val	Ile	Met	Ser	Arg	Arg	Val	Cys	Gln	Val	Leu
	130					135					140				
Val	Ala	Ile	Pro	Tyr	Leu	Tyr	Cys	Thr	Phe	Ile	Ser	Leu	Leu	Val	Thr
145					150					155					160
Ile	Lys	Ile	Phe	Thr	Leu	Ser	Phe	Cys	Gly	Tyr	Asn	Val	Ile	Ser	His
				165					170					175	
Phe	Tyr	Cys	Asp	Ser	Leu	Pro	Leu	Leu	Pro	Leu	Leu	Cys	Ser	Asn	Thr
			180					185					190		
His	Glu	Ile	Glu	Leu	Ile	Ile	Leu	Ile	Phe	Ala	Ala	Ile	Asp	Leu	Ile
		195					200					205			
Ser	Ser	Leu	Leu	Ile	Val	Leu	Leu	Ser	Tyr	Leu	Leu	Ile	Leu	Val	Ala
	210					215					220				
Ile	Leu	Arg	Met	Asn	Ser	Ala	Gly	Arg	Gln	Lys	Ala	Phe	Ser	Thr	Cys
225					230					235					240
Gly	Ala	His	Leu	Thr	Val	Val	Ile	Val	Phe	Tyr	Gly	Thr	Leu	Leu	Phe
				245					250					255	
Met	Tyr	Val	Gln	Pro	Lys	Ser	Ser	His	Ser	Phe	Asp	Thr	Asp	Lys	Val
			260					265					270		
Ala	Ser	Ile	Phe	Tyr	Thr	Leu	Val	Ile	Pro	Met	Leu	Asn	Pro	Leu	Ile
		275					280					285			
Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys	Tyr	Ala	Leu	Arg	Arg	Thr	Trp
	290				295						300				
Asn	Asn	Leu	Cys	Asn	Ile	Phe	Val								
305					310										

<210> 138

<211> 939

<212> DNA

<213> Homo sapiens

<400> 138

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gctgagctgc aggcaccatt atttgcattg ttccctcatga tctatgtgat ctcaagtgat 120
ggcaatttgg gcatgattgt cctcaccaag ttggactcca gggttgcaaac ccctatgtac 180
ttttttctca gacatctggc ttcatggat cttgggttatt caacaactgt gggacccaaa 240
atgtagtaaa attttgttgt ggataagaat ataatttctt attatttttg tgcaacacag 300
ctagctttct ttcttggtgt cattggtagt gaacttttta ttctctcagc catgtcctac 360
gacctctatg tggccatctg taacctctctg ctatacacag taatcatgtc acgaagggtta 420
tgtcaggtgc tggtagcaat cccttacctc tattgcacat tcattttctct tctagtcacc 480
ataaagattt ttactttatc cttctgtggc tacaacgtca ttagtcattt ctactgtgac 540
agtctccctt tgttaccttt gctttgttca aatacacatg aaattgaatt gataattctg 600
atctttgcag ctattgattt gatttcattt cttctgatag ttcttttatc ttacctgctc 660
atcctttagt ccattctcag gatgaattct gctggcagac aaaaggcttt ttctacctgt 720
ggagcccacc tgacagtggg catagtgttc tatgggactt tgcttttcat gtacgtgcag 780
cccaagtcca gtcattcctt tgacactgat aaagtggctt ccatatttta caccctggtt 840
atccccatgt tgaatccctt gatctatagt ttacgaaaca aagatgtaaa atatgccta 900
cgaaggacat ggaataactt atgtaatat tttgtttaa 939

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<210> 139
 <211> 337
 <212> PRT
 <213> Homo sapiens

<400> 139

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Met Glu Gly Lys Asn Gln Thr Asn Ile Ser Glu Phe Leu Leu Leu Gly
  1              5              10              15

Phe Ser Ser Trp Gln Gln Gln Gln Val Leu Leu Phe Ala Leu Phe Leu
      20              25              30

Cys Leu Tyr Leu Thr Gly Leu Phe Gly Asn Leu Leu Ile Leu Leu Ala
      35              40              45

Ile Gly Ser Asp His Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ala
      50              55              60

Asn Leu Ser Leu Val Asp Leu Cys Leu Pro Ser Ala Thr Val Pro Lys
      65              70              75              80

Met Leu Leu Asn Ile Gln Thr Gln Thr Gln Thr Ile Ser Tyr Pro Gly
      85              90              95

Cys Leu Ala Gln Met Tyr Phe Cys Met Met Phe Ala Asn Met Asp Asn
      100              105              110

Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
      115              120              125

Pro Leu His Tyr Ser Thr Ile Met Ala Leu Arg Leu Cys Ala Ser Leu
      130              135              140

Val Ala Ala Pro Trp Val Ile Ala Ile Leu Asn Pro Leu Leu His Thr
      145              150              155              160

Leu Met Met Ala His Leu His Phe Cys Ser Asp Asn Val Ile His His
      165              170              175

Phe Phe Cys Asp Ile Asn Ser Leu Leu Pro Leu Ser Cys Ser Asp Thr
      180              185              190

Ser Leu Asn Gln Leu Ser Val Leu Ala Thr Val Gly Leu Ile Phe Val
      195              200              205

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Val Pro Ser Val Cys Ile Leu Val Ser Tyr Ile Leu Ile Val Ser Ala
 210 215 220
 Val Met Lys Val Pro Ser Ala Gln Gly Lys Leu Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Gly Ser His Leu Ala Leu Val Ile Leu Phe Tyr Gly Ala Asn Thr
 245 250 255
 Gly Val Tyr Met Ser Pro Leu Ser Asn His Ser Thr Glu Lys Asp Ser
 260 265 270
 Ala Ala Ser Val Ile Phe Met Val Val Ala Pro Val Leu Asn Pro Phe
 275 280 285
 Ile Tyr Ser Leu Arg Asn Asn Glu Leu Lys Gly Thr Leu Lys Lys Thr
 290 295 300
 Leu Ser Arg Pro Gly Ala Val Ala His Ala Cys Asn Pro Ser Thr Leu
 305 310 315 320
 Gly Gly Arg Gly Gly Trp Ile Met Arg Ser Gly Asp Arg Asp His Pro
 325 330 335

Gly

<210> 140
 <211> 1014
 <212> DNA
 <213> Homo sapiens

<400> 140
 atggaaggga aaaatcaaac caatatctct gaatttctcc tcttgggctt ctcaagttgg 60
 caacaacagc aggtgctact ctttgcactt ttctgtgtc tctatttaac agggctgttt 120
 ggaaacttac tcatcttgct ggccattggc tcggatcact gccttcacac acccatgtat 180
 ttcttccttg ccaatctgtc cttggtagac ctctgccttc cctcagccac agtccccaag 240
 atgctactga acatccaaac ccaaacccaa accatctcct atcccggctg cctggctcag 300
 atgtatttct gtatgatgtt tgccaatatg gacaattttc ttctcacagt gatggcatat 360
 gaccgttacg tggccatctg tcacccttta cactactcca ccattatggc cctgcgcctc 420
 tgtgcctctc tggtagctgc accttgggtc attgccattt tgaaccctct cttgcacact 480
 cttatgatgg cccatctgca cttctgctct gataatgtta tccaccattt cttctgtgat 540
 atcaactctc tcttccctct gtctgttcc gacaccagtc ttaatcagtt gagtgttctg 600
 gctacggtgg ggctgatctt tgtggtacct tcagtgtgta tcttgggtatc ctatatcctc 660
 attgtttctg ctgtgatgaa agtcccttct gcccaaggaa aactcaaggc tttctctacc 720
 tgtggatctc accttgctt ggtcattctt ttctatggag caaacacagg ggtctatatg 780
 agccccttat ccaatcactc tactgaaaaa gactcagccg catcagtcac ttttatgggt 840
 gtagcacctg tgttgaatcc attcatttac agttaaagaa acaatgaact gaaggggact 900
 ttaaaaaaga ccctaagccg gccgggcgcg gtggctcacg cctgtaatcc cagcactttg 960
 ggaggccgag gcgggtggat catgaggtca ggagatcgag accatcctgg ctaa 1014

<210> 141
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 141
 Met Glu Asn Asn Thr Glu Val Ser Glu Phe Ile Leu Leu Gly Leu Thr

1	5	10	15
Asn Ala Pro Glu Leu Gln Val Pro Leu Phe Ile Met Phe Thr Leu Ile	20	25	30
Tyr Leu Ile Thr Leu Thr Gly Asn Leu Gly Met Ile Ile Leu Ile Leu	35	40	45
Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu	50	55	60
Ser Leu Ala Gly Ile Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Leu	65	70	75
Thr Gly Leu Leu Ile Glu Asp Lys Ala Ile Ser Tyr Ser Ala Cys Ala	85	90	95
Ala Gln Met Phe Phe Cys Ala Val Phe Ala Thr Val Glu Asn Tyr Leu	100	105	110
Leu Ser Ser Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys Asn Pro Leu	115	120	125
His Tyr Thr Thr Thr Met Thr Thr Arg Val Cys Ala Cys Leu Ala Ile	130	135	140
Gly Cys Tyr Val Ile Gly Phe Leu Asn Ala Ser Ile Gln Ile Gly Asp	145	150	155
Thr Phe Arg Leu Ser Phe Cys Met Ser Asn Val Ile His His Phe Phe	165	170	175
Cys Asp Lys Pro Ala Val Ile Thr Leu Thr Cys Ser Glu Lys His Ile	180	185	190
Ser Glu Leu Ile Leu Val Leu Ile Ser Ser Phe Asn Val Phe Phe Ala	195	200	205
Leu Leu Val Thr Leu Ile Ser Tyr Leu Phe Ile Leu Ile Thr Ile Leu	210	215	220
Lys Arg His Thr Gly Lys Gly Tyr Gln Lys Pro Leu Ser Thr Cys Gly	225	230	235
Ser His Leu Ile Ala Ile Phe Leu Phe Tyr Ile Thr Val Ile Ile Met	245	250	255
Tyr Ile Arg Pro Ser Ser Ser His Ser Met Asp Thr Asp Lys Ile Ala	260	265	270
Ser Val Phe Tyr Thr Met Ile Ile Pro Met Leu Ser Pro Ile Val Tyr	275	280	285
Thr Leu Arg Asn Lys Asp Val Lys Asn Ala Phe Met Lys Val Val Glu	290	295	300
Lys Ala Lys Tyr Ser Leu Asp Ser Val Phe	305	310	

<210> 142

<211> 945
<212> DNA
<213> Homo sapiens

<400> 142
atggagaata atacagaggt gagtgaattc atcctgcttg gtctaacc aa tgccccagaa 60
ctacagggttc ccctctttat catgtttacc ctcatctacc tcatcactct gactgggaac 120
ctggggatga tcatattaat cctgctggac tctcatctcc aactcccat gtactttttt 180
ctcagtaacc tgtctcttgc aggcattggg tactcctcag ctgtcactcc aaagggttta 240
actgggttgc ttatagaaga caaagccatc tcctacagtg cctgtgctgc tcagatgttc 300
ttttgtgcag tctttgccac tgtggaaaat tacctcttgt cctcaatggc ctatgaccgc 360
tacgcagcag tgtgtaaccc cctacattat accaccacca tgacaacacg tgtgtgtgct 420
tgtctggcta taggctgtta tgtcattggg tttctgaatg cttctatcca aattggagat 480
acatttcgcc tctctttctg catgtccaat gtgattcatc actttttctg tgacaaacca 540
gcagtcatta ctctgacctg ctctgagaaa cacattagtg agttgattct tgttcttata 600
tcaagtttta atgtcttttt tgcacttctt gttaccttga tttcctatct gttcatattg 660
atcaccattc ttaagaggca cacaggtaag ggataccaga agcctttatc tacctgtggg 720
tctcacctca ttgccatttt cttattttat ataactgtca tcatcatgta catacgacca 780
agttccagtc attccatgga cacagacaaa attgcatctg tgttctacac tatgatcatc 840
cccatgctca gtccatatag ctataccctg aggaacaaaag acgtgaagaa tgcattcatg 900
aaggttggtg agaaggcaaa atattctcta gattcagtct ttttaa 945

<210> 143
<211> 314
<212> PRT
<213> Homo sapiens

<400> 143
Met Gly Asp Val Asn Gln Ser Val Ala Ser Asp Phe Ile Leu Val Gly
1 5 10 15
Leu Phe Ser His Ser Gly Ser Arg Gln Leu Leu Phe Ser Leu Val Ala
20 25 30
Val Met Phe Val Ile Gly Leu Leu Gly Asn Thr Val Leu Leu Phe Leu
35 40 45
Ile Arg Val Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60
Gln Leu Ser Leu Phe Asp Ile Gly Cys Pro Met Val Thr Ile Pro Lys
65 70 75 80
Met Ala Ser Asp Phe Leu Arg Gly Glu Gly Ala Thr Ser Tyr Gly Gly
85 90 95
Gly Ala Ala Gln Ile Phe Phe Leu Thr Leu Met Gly Val Ala Glu Gly
100 105 110
Val Leu Leu Val Leu Met Ser Tyr Asp Arg Tyr Val Ala Val Cys Gln
115 120 125
Pro Leu Gln Tyr Pro Val Leu Met Arg Arg Gln Val Cys Leu Leu Met
130 135 140
Met Gly Ser Ser Trp Val Val Gly Val Leu Asn Ala Ser Ile Gln Thr
145 150 155 160
Ser Ile Thr Leu His Phe Pro Tyr Cys Ala Ser Arg Ile Val Asp His
165 170 175

Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
 180 185 190
 Cys Ala Tyr Glu Met Ala Leu Ser Thr Ser Gly Val Leu Ile Leu Met
 195 200 205
 Leu Pro Leu Ser Leu Ile Ala Thr Ser Tyr Gly His Val Leu Gln Ala
 210 215 220
 Val Leu Ser Met Arg Ser Glu Glu Ala Arg His Lys Ala Val Thr Thr
 225 230 235 240
 Cys Ser Ser His Ile Thr Val Val Gly Leu Phe Tyr Gly Ala Ala Val
 245 250 255
 Phe Met Tyr Met Val Pro Cys Ala Tyr His Ser Pro Gln Gln Asp Asn
 260 265 270
 Val Val Ser Leu Phe Tyr Ser Leu Val Thr Pro Thr Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Pro Glu Val Trp Met Ala Leu Val Lys Val
 290 295 300
 Leu Ser Arg Ala Gly Leu Arg Gln Met Cys
 305 310

<210> 144
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 144
 atgggggatg tgaatcagtc ggtggcctca gacttcattc tgggtgggcct cttcagtcac 60
 tcaggatcac gccagctcct cttctccctg gtggctgtca tgtttgtcat aggccttctg 120
 ggcaaacaccg ttcttctctt cttgatccgt gtggactccc ggctccacac acccatgtac 180
 ttctgtctca gccagctctc cctgtttgac attggtgtgc ccatggtcac catccccaag 240
 atggcatcag actttctgcg gggagaaggt gccacctcct atggaggtgg tgcagctcaa 300
 atattcttcc tcacactgat ggggtgtggct gagggcgctc tgttggtcct catgtcttat 360
 gaccgttatg ttgctgtgtg ccagcccctg cagtatcctg tacttatgag acgccaggta 420
 tgtctgtctga tgatgggctc ctctgtgggt gtaggtgtgc tcaacgcctc catccagacc 480
 tccatcaccc tgcattttcc ctactgtgcc tcccgattg tggatcactt cttctgtgag 540
 gtgccagccc tactgaagct ctctgtgtga gatacctgtg cctacgagat ggcgctgtcc 600
 acctcagggg tgctgatact aatgctccct ctttccctca tcgccacctc ctacggccac 660
 gtgttgacagg ctgttctaag catgcgctca gaggaggcca gacacaaggc tgtcaccacc 720
 tgctcctcgc acatcacggt agtggggctc ttttatgggt cgcgccgtgt catgtacatg 780
 gtgccttgcg cctaccacag tccacagcag gataacgtgg tttccctctt ctatagcctt 840
 gtcaccacct cactcaacc ctttatctac agtctgagga atccggaggt gtggatggct 900
 ttggtcaaag tgcttagcag agctggactc aggcaaatgt gctga 945

<210> 145
 <211> 331
 <212> PRT
 <213> Homo sapiens

<400> 145
 Met Ser Pro Asp Gly Asn His Ser Ser Asp Pro Thr Glu Phe Val Leu
 1 5 10 15

Ala	Gly	Leu	Pro	Asn	Leu	Asn	Ser	Ala	Arg	Val	Glu	Leu	Phe	Ser	Val	20	25	30
Phe	Leu	Leu	Val	Tyr	Leu	Leu	Asn	Leu	Thr	Gly	Asn	Val	Leu	Ile	Val	35	40	45
Gly	Val	Val	Arg	Ala	Asp	Thr	Arg	Leu	Gln	Thr	Pro	Met	Tyr	Phe	Phe	50	55	60
Leu	Gly	Asn	Leu	Ser	Cys	Leu	Glu	Ile	Leu	Leu	Thr	Ser	Val	Ile	Ile	65	70	75
Pro	Lys	Met	Leu	Ser	Asn	Phe	Leu	Ser	Arg	Gln	His	Thr	Ile	Ser	Phe	85	90	95
Ala	Ala	Cys	Ile	Thr	Gln	Phe	Tyr	Phe	Tyr	Phe	Phe	Leu	Gly	Ala	Ser	100	105	110
Glu	Phe	Leu	Leu	Leu	Ala	Val	Met	Ser	Ala	Asp	Arg	Tyr	Leu	Ala	Ile	115	120	125
Cys	His	Pro	Leu	Arg	Tyr	Pro	Leu	Leu	Met	Ser	Gly	Ala	Val	Cys	Phe	130	135	140
Arg	Val	Ala	Leu	Ala	Cys	Trp	Val	Gly	Gly	Leu	Val	Pro	Val	Leu	Gly	145	150	155
Pro	Thr	Val	Ala	Val	Ala	Leu	Leu	Pro	Phe	Cys	Lys	Gln	Gly	Ala	Val	165	170	175
Val	Gln	His	Phe	Phe	Cys	Asp	Ser	Gly	Pro	Leu	Leu	Arg	Leu	Ala	Cys	180	185	190
Thr	Asn	Thr	Lys	Lys	Leu	Glu	Glu	Thr	Asp	Phe	Val	Leu	Ala	Ser	Leu	195	200	205
Val	Ile	Val	Ser	Ser	Leu	Leu	Ile	Thr	Ala	Val	Ser	Tyr	Gly	Leu	Ile	210	215	220
Val	Leu	Ala	Val	Leu	Ser	Ile	Pro	Ser	Ala	Ser	Gly	Arg	Gln	Lys	Ala	225	230	235
Phe	Ser	Thr	Cys	Thr	Ser	His	Leu	Ile	Val	Val	Thr	Leu	Phe	Tyr	Gly	245	250	255
Ser	Ala	Ile	Phe	Leu	Tyr	Val	Arg	Pro	Ser	Gln	Ser	Gly	Ser	Val	Asp	260	265	270
Thr	Asn	Trp	Ala	Val	Thr	Val	Ile	Thr	Thr	Phe	Val	Thr	Pro	Leu	Leu	275	280	285
Asn	Pro	Phe	Ile	Tyr	Ala	Leu	Arg	Asn	Glu	Gln	Val	Lys	Glu	Ala	Leu	290	295	300
Lys	Asp	Met	Phe	Arg	Lys	Val	Val	Ala	Gly	Val	Leu	Gly	Asn	Leu	Leu	305	310	315
Leu	Asp	Lys	Cys	Leu	Ser	Glu	Lys	Ala	Val	Lys						325	330	

<210> 146
 <211> 996
 <212> DNA
 <213> Homo sapiens

<400> 146
 atgagtcctg atgggaacca cagtagtgat ccaacagagt tcgtcctggc agggctccca 60
 aatctcaaca gcgcaagagt ggaattattt tctgtgtttc ttcttgtcta tctcctgaat 120
 ctgacaggca atgtgttgat tgtgggggtg gtaagggctg atactcgact acagaccct 180
 atgtacttct ttctgggtaa cctgtcctgc cttagagatac tgctcacttc tgcatcatt 240
 ccaaagatgc tgagcaattt cctctcaagg caacacacta tttcctttgc tgcattgtatc 300
 acccaattct atttctactt ctttctcggg gcctccgagt tcttactgtt ggctgtcatg 360
 tctgcggtac gctacctggc catctgtcat cctctgcgt accccttgct catgagtggg 420
 gctgtgtgct ttctgtgtggc cttggcctgc tgggtggggg gactcgtccc tgtgcttggg 480
 cccacagtgg ctgtggcctt gcttcctttc tgtaagcagg gtgctgtggg acagcacttc 540
 ttctgcgaca gtggcccact gctccgctg gcttgaccca acaccaagaa gctggaggag 600
 actgactttg tcctggcctc cctcgtcatt gtatcttct tgcgtatcac tgctgtgtcc 660
 tacggcctca ttgtgctggc agtcctgagc atcccctctg cttcaggccg tcagaaggcc 720
 ttctctacct gtacctccca cttgatagtg gtgaccctct tctatggaag tgccattttt 780
 ctctatgtgc ggccatcgca gagtggttct gtggacacta actgggcagt gacagtaata 840
 acgacatttg tgacaccact gttgaatcca ttcattctat ccttacgtaa tgagcaagtc 900
 aaggaagctt tgaaggacat gtttaggaag gtagtggcag gcgttttagg gaatctttta 960
 cttgataaat gtctcagtga gaaagcagta aagtaa 996

<210> 147
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 147
 Met Thr Pro Gly Glu Leu Ala Leu Ala Ser Gly Asn His Thr Pro Val
 1 5 10 15
 Thr Lys Phe Ile Leu Gln Gly Phe Ser Asn Tyr Pro Asp Leu Gln Glu
 20 25 30
 Leu Leu Phe Gly Ala Ile Leu Leu Ile Tyr Ala Ile Thr Val Val Gly
 35 40 45
 Asn Leu Gly Met Met Ala Leu Ile Phe Thr Asp Ser His Leu Gln Ser
 50 55 60
 Pro Met Tyr Phe Phe Leu Asn Val Leu Ser Phe Leu Asp Ile Cys Tyr
 65 70 75 80
 Ser Ser Val Val Thr Pro Lys Leu Leu Val Asn Phe Leu Val Ser Asp
 85 90 95
 Lys Ser Ile Ser Phe Glu Gly Cys Val Val Gln Leu Ala Phe Phe Val
 100 105 110
 Val His Val Thr Ala Glu Ser Phe Leu Leu Ala Ser Met Ala Tyr Asp
 115 120 125
 Arg Phe Leu Ala Ile Cys Gln Pro Leu His Tyr Gly Ser Ile Met Thr
 130 135 140
 Arg Gly Thr Cys Leu Gln Leu Val Ala Val Ser Tyr Ala Phe Gly Gly
 145 150 155 160

Ala Asn Ser Ala Ile Gln Thr Gly Asn Val Phe Ala Leu Pro Phe Cys
165 170 175

Gly Pro Asn Gln Leu Thr His Tyr Tyr Cys Asp Ile Pro Pro Leu Leu
180 185 190

His Leu Ala Cys Ala Asn Thr Ala Thr Ala Arg Val Val Leu Tyr Val
195 200 205

Phe Ser Ala Leu Val Thr Leu Leu Pro Ala Ala Val Ile Leu Thr Ser
210 215 220

Tyr Cys Leu Val Leu Val Ala Ile Gly Arg Met Arg Ser Val Ala Gly
225 230 235 240

Arg Glu Lys Asp Leu Ser Thr Cys Ala Ser His Phe Leu Ala Ile Ala
245 250 255

Ile Phe Tyr Gly Thr Val Val Phe Thr Tyr Val Gln Pro His Gly Ser
260 265 270

Thr Asn Asn Thr Asn Gly Gln Val Val Ser Val Phe Tyr Thr Ile Ile
275 280 285

Ile Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Glu Val
290 295 300

Lys Gly Ala Leu Gln Arg Lys Leu Gln Val Asn Ile Phe Pro Gly
305 310 315

<210> 148
<211> 960
<212> DNA
<213> Homo sapiens

<400> 148
atgacacctg gagaactagc ccttgccagt ggcaaccaca cccagtcac caagttcatc 60
ttgcagggat tctccaatta tccagacctc caggagcttc tcttcggagc catcctgctc 120
atctatgcca taacagtggg gggcaacttg ggaatgatgg cactcatctt cacagactcc 180
catctccaaa gcccaatgta tttcttctc aatgtcctct cgtttcttga tatttggtac 240
tcttctgtgg tcacacctaa gctcttggtc aacttctctg tctctgacaa gtccatctct 300
tttgagggct gtgtgggtcca gctcgcttc tttgtagtgc atgtgacagc tgagagcttc 360
ctgctggcct ccatggccta tgaccgcttc ctagccatct gtcaaccctt ccattatggg 420
tctatcatga ccagggggac ctgtctccag ctggtagctg tgtcctatgc atttggtgga 480
gccaaactccg ctatccagac tggaaatgtc tttgccctgc ctttctgtgg gcccaaccag 540
ctaacacact actactgtga cataccacct cttctccacc tggcttgtgc caacacagcc 600
acagcaagag tggctctcta tgtcttttct gctctggtca cccttctgcc tgctgcagtc 660
attctcacct cctactgctt ggtcttggtg gccattggga ggatgcgctc agtagcaggg 720
agggagaagg acctctccac ttgtgcctcc cactttctgg ccattgccat tttctatggc 780
actgtggttt tcacctatgt tcagcccat ggatctacta acaataccaa tggccaagta 840
gtgtccgtct tctacaccat cataattccc atgtcgaatc ccttcatcta tagcctccgc 900
aacaaggagg tgaagggcgc tctgcagagg aagcttcagg tcaacatctt tcccggctga 960

<210> 149
<211> 309
<212> PRT
<213> Homo sapiens

[illegible]

<210> 150
<211> 930
<212> DNA
<213> Homo sapiens

<400> 150
atggaaggaa taaataaaac tgcaaagatg cagtttttct ttcgtccatt ctcacctgac 60
cctgagggtcc agatgctgat ttttgtgggc ttctgatga tgtatctgac cagcctcggt 120
ggaaatgcta caattgcagt cattgttcag atcaatcatt ccctccacac ccccatgtac 180
tttttcctgg ctaatctggc agttctagaa atcttctata catcttccat caccctcattg 240
gccttggcaa acctcctttc aatgggcaaa actcctgttt ccatcacggg atgtggcacc 300
cagatgtttt tctttgtctt cttgggtggg gctgattgtg tcctgctggg agtcatggct 360
tatgaccggt ttatagcgat ctgtcaccct ctgcgataca ggctcatcat gagctgggtcc 420
ttgtgtgtgg agctgctggg aggtccttgg gtgctggggg tcctgttggt actgccactc 480
accatttttaa tcttccatct cccattctgc cacaatgatg agatctacca cttctactgt 540
gacatgcctg cagtcatgag cctggcttgg gcagacacac gcgttcacaa gactgctctg 600
tatatcatca gcttcatcgt ccttagcatc cccctctcat tgatctccat ctcctatgtc 660
ttcatcgtgg tagccatttt acggatccgg tcagcagaag ggcgccagca agcctactct 720
acctgctctt ctcacatctt agtggctctc ctgcagtatg gctgcaccag ctttatatac 780
ttgtcccca gttccagcta ctctcctgag atgggccggg tggatatctgt ggctacaca 840
tttatcactc ccatttttaa ccccttgatc tatagtttga ggaacaagga actgaaagat 900
gccctaagga aagcattgag aaaattctag 930

<210> 151
<211> 409
<212> PRT
<213> Homo sapiens

<400> 151
Met Gly Val Lys Asn His Ser Thr Val Thr Glu Phe Leu Leu Ser Gly
1 5 10 15
Leu Thr Glu Gln Ala Glu Leu Gln Leu Pro Leu Phe Cys Leu Phe Leu
20 25 30
Gly Ile Tyr Thr Val Thr Val Val Gly Asn Leu Ser Met Ile Ser Ile
35 40 45
Ile Arg Leu Asn Arg Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
50 55 60
Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
65 70 75 80
Met Met Lys Leu Trp Met Glu Ser His Leu Ile Val Pro Glu Thr Arg
85 90 95
Pro Ser Pro Arg Met Met Ser Asn Gln Thr Leu Val Thr Glu Phe Ile
100 105 110
Leu Gln Gly Phe Ser Glu His Pro Glu Tyr Arg Val Phe Leu Phe Ser
115 120 125
Cys Phe Leu Phe Leu Tyr Ser Gly Ala Leu Thr Gly Asn Val Leu Ile
130 135 140
Thr Leu Ala Ile Thr Phe Asn Pro Gly Leu His Ala Pro Met Tyr Phe
145 150 155 160

Phe Leu Leu Asn Leu Ala Thr Met Asp Ile Ile Cys Thr Ser Ser Ile
 165 170 175
 Met Pro Lys Ala Leu Ala Ser Leu Val Ser Glu Glu Ser Ser Ile Ser
 180 185 190
 Tyr Gly Gly Cys Met Ala Gln Leu Tyr Phe Leu Thr Trp Ala Ala Ser
 195 200 205
 Ser Glu Leu Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ala Ala
 210 215 220
 Ile Cys His Pro Leu His Tyr Ser Ser Met Met Ser Lys Val Phe Cys
 225 230 235 240
 Ser Gly Leu Ala Thr Ala Val Trp Leu Leu Cys Ala Val Asn Thr Ala
 245 250 255
 Ile His Thr Gly Leu Met Leu Arg Leu Asp Phe Cys Gly Pro Asn Val
 260 265 270
 Ile Ile His Phe Phe Cys Glu Val Pro Pro Leu Leu Leu Leu Ser Cys
 275 280 285
 Ser Ser Thr Tyr Val Asn Gly Val Met Ile Val Leu Ala Asp Ala Phe
 290 295 300
 Tyr Gly Ile Val Asn Phe Leu Met Thr Ile Ala Ser Tyr Gly Phe Ile
 305 310 315 320
 Val Ser Ser Ile Leu Lys Val Lys Thr Ala Trp Gly Arg Gln Lys Ala
 325 330 335
 Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Cys Met Tyr Tyr Thr
 340 345 350
 Ala Val Phe Tyr Ala Tyr Ile Ser Pro Val Ser Gly Tyr Ser Ala Gly
 355 360 365
 Lys Ser Lys Leu Ala Gly Leu Leu Tyr Thr Val Leu Ser Pro Thr Leu
 370 375 380
 Asn Pro Leu Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala Ala Leu
 385 390 395 400
 Arg Lys Leu Phe Pro Phe Phe Arg Asn
 405

<210> 152
 <211> 987
 <212> DNA
 <213> Homo sapiens

<400> 152
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 atgagtaacc agacgttggg aaccgagttc atcctgcagg gcttttcgga gcaccagaa 120
 taccgggtgt tcttattcag ctgtttcctc ttcctctact ctggggccct cacaggtaat 180
 gtccatcatca ccttgccat caggttcaac cctgggctcc acgctcctat gtactttttc 240
 ttactcaact tggctactat ggacattatc tgcacctctt ccatcatgcc caaggcgctg 300
 gccagtctgg tgtcggaaga gagctccatc tcctacgggg gctgcatggc ccagctctat 360

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ttcctcacgt gggctgcatc ctcagagctg ctgctcctca cggtcatggc ctatgaccgg 420
tacgcagcca tctgccaccc gctgcattac agcagcatga tgagcaaggt gttctgcagc 480
gggctggcca cagccgtgtg gctgctctgc gccgtcaaca cggccatcca cacggggctg 540
atgctgcgct tggatttctg tggccccaat gtcattatcc atttcttctg cgaggccct 600
ccccgtctgc ttctctcctg cagctccacc tacgtcaacg gtgtcatgat tgtcctggcg 660
gatgctttct acggcatagt gaacttcctg atgaccatcg cgctctatgg cttcatcgctc 720
tccagcatcc tgaagggtgaa gactgcctgg gggaggcaga aagccttctc cacctgctct 780
tccacactca ccgtgggtgtg catgtattac accgctgtct tctacgccta cataagcccg 840
gtctctgggt acagcgcagg gaagagcaag ttggctggcc tgctgtacac tgtgtgagt 900
cctaccctca accccctcat ctatactttg agaaacaagg aggtcaaagc agccctcagg 960
aagcttttcc ctttcttcag aaattaa 987

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<210> 153
 <211> 310
 <212> PRT
 <213> Homo sapiens

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<400> 153
Met Gln Leu Asn Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
  1                      5                      10                      15

Gln Asp Pro Phe Trp Lys Lys Ile Val Phe Val Ile Phe Leu Arg Leu
      20                      25                      30

Tyr Leu Gly Thr Leu Leu Gly Asn Leu Leu Ile Ile Ile Ser Val Lys
      35                      40                      45

Ala Ser Gln Ala Leu Lys Asn Pro Met Phe Phe Phe Leu Phe Tyr Leu
      50                      55                      60

Ser Leu Ser Asp Thr Cys Leu Ser Thr Ser Ile Ala Pro Arg Met Ile
      65                      70                      75                      80

Val Asp Ala Leu Leu Lys Lys Thr Thr Ile Ser Phe Ser Glu Cys Met
      85                      90                      95

Ile Gln Val Phe Ser Ser His Val Phe Gly Cys Leu Glu Ile Phe Ile
      100                      105                      110

Leu Ile Leu Thr Ala Val Asp Arg Tyr Val Asp Ile Cys Lys Pro Leu
      115                      120                      125

His Tyr Met Thr Ile Ile Ser Gln Trp Val Cys Gly Val Leu Met Ala
      130                      135                      140

Val Ala Trp Val Gly Ser Cys Val His Ser Leu Val Gln Ile Phe Leu
      145                      150                      155                      160

Ala Leu Ser Leu Pro Phe Cys Gly Pro Asn Val Ile Asn His Cys Phe
      165                      170                      175

Cys Asp Leu Gln Pro Leu Leu Lys Gln Ala Cys Ser Glu Thr Tyr Val
      180                      185                      190

Val Asn Leu Leu Val Ser Asn Ser Gly Ala Ile Cys Ala Val Ser
      195                      200                      205

Tyr Val Met Leu Ile Phe Ser Tyr Val Ile Phe Leu His Ser Leu Arg
      210                      215                      220

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65	70	75	80
Pro Thr Met Leu Ala Val Leu Trp Leu Asp Ala Pro Glu Ile Gln Ala			
	85	90	95
Ser Ala Cys Tyr Ala Gln Leu Phe Phe Ile His Thr Phe Thr Phe Leu			
	100	105	110
Glu Ser Ser Val Leu Leu Ala Met Ala Phe Asp Arg Phe Val Ala Ile			
	115	120	125
Cys His Pro Leu His Tyr Pro Thr Ile Leu Thr Asn Ser Val Ile Gly			
	130	135	140
Lys Ile Gly Leu Ala Cys Leu Leu Arg Ser Leu Gly Val Val Leu Pro			
	145	150	155
Thr Pro Leu Leu Leu Arg His Tyr His Tyr Cys His Gly Asn Ala Leu			
	165	170	175
Ser His Ala Phe Cys Leu His Gln Asp Val Leu Arg Leu Ser Cys Thr			
	180	185	190
Asp Ala Arg Thr Asn Ser Ile Tyr Gly Leu Cys Val Val Ile Ala Thr			
	195	200	205
Leu Gly Val Asp Ser Ile Phe Ile Leu Leu Ser Tyr Val Leu Ile Leu			
	210	215	220
Asn Thr Val Leu Asp Ile Ala Ser Arg Glu Glu Gln Leu Lys Ala Leu			
	225	230	235
Asn Thr Cys Val Ser His Ile Cys Val Val Leu Ile Phe Phe Val Pro			
	245	250	255
Val Ile Gly Val Ser Met Val His Arg Phe Gly Lys His Leu Ser Pro			
	260	265	270
Ile Val His Ile Leu Met Ala Asp Ile Tyr Leu Leu Leu Pro Pro Val			
	275	280	285
Leu Asn Pro Ile Val Tyr Ser Val Arg Thr Lys Gln Ile Arg Leu Gly			
	290	295	300
Ile Leu His Lys Phe Val Leu Arg Arg Arg Phe			
	305	310	315

<210> 108

<211> 948

<212> DNA

<213> Homo sapiens

<400> 108

atgggagact	ggaataacag	tgatgctgtg	gagcccatat	ttatcctgag	gggttttcct	60
ggactggagt	atgttcattc	ttggctctcc	atcctcttct	gtcttgcata	tttggttagca	120
tttatgggta	atgttaccat	cctgtctgtc	atttggatag	aatcctctct	ccatcagccc	180
atgtattact	ttatttccat	cttagcagtg	aatgacctgg	ggatgtccct	gtctacactt	240
cccaccatgc	ttgctgtggt	atggttggat	gctccagaga	tccaggcaag	tgcttgctat	300
gctcagctgt	tcttcateca	cacattcaca	ttcctggagt	cctcagtggt	gctggccatg	360
gcctttgacc	gttttggtgc	tatctgccat	ccactgcact	acccaccat	cctcaccaac	420


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agtgttaattg gcaaaattgg tttggcctgt ttgctacgaa gcttgggagt tgtacttccc 480
acacctttgc tactgagaca ctatcactac tgccatggca atgccctctc tcacgccttc 540
tgtttgcacc aggatgttct aagattatcc tgtacagatg ccaggaccaa cagtatttat 600
gggctttgtg tagtcattgc cacactaggt gtggattcaa tcttcatact tctttcttat 660
gttctgattc ttaatactgt gctggatatt gcattctcgtg aagagcagct aaaggcactc 720
aacacatgtg tatcccatat ctgtgtggtg cttatcttct ttgtgccagt tattggggtg 780
tcaatgggtcc atcgcttttg gaagcatctg tctcccatag tccacatcct catggcagac 840
atctaccttc ttcttcccc agtccttaac cctattgtct atagtgtcag aacaaagcag 900
attcgtctag gaattctcca caagtttgtc ctaaggagga ggttttaa 948

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<210> 109
 <211> 325
 <212> PRT
 <213> Homo sapiens

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<400> 109
Met Phe Leu Pro Asn Asp Thr Gln Phe His Pro Ser Ser Phe Leu Leu
  1                      5                      10                      15

Leu Gly Ile Pro Gly Leu Glu Thr Leu His Ile Trp Ile Gly Phe Pro
      20                      25                      30

Phe Cys Ala Val Tyr Met Ile Ala Leu Ile Gly Asn Phe Thr Ile Leu
      35                      40                      45

Leu Val Ile Lys Thr Asp Ser Ser Leu His Gln Pro Met Phe Tyr Phe
      50                      55                      60

Leu Ala Met Leu Ala Thr Thr Asp Val Gly Leu Ser Thr Ala Thr Ile
      65                      70                      75                      80

Pro Lys Met Leu Gly Ile Phe Trp Ile Asn Leu Arg Gly Ile Ile Phe
      85                      90                      95

Glu Ala Cys Leu Thr Gln Met Phe Phe Ile His Asn Phe Thr Leu Met
      100                      105                      110

Glu Ser Ala Val Leu Val Ala Met Ala Tyr Asp Ser Tyr Val Ala Ile
      115                      120                      125

Cys Asn Pro Leu Gln Tyr Ser Ala Ile Leu Thr Asn Lys Val Val Ser
      130                      135                      140

Val Ile Gly Leu Gly Val Phe Val Arg Ala Leu Ile Phe Val Ile Pro
      145                      150                      155                      160

Ser Ile Leu Leu Ile Leu Arg Leu Pro Phe Cys Gly Asn His Val Ile
      165                      170                      175

Pro His Thr Tyr Cys Glu His Met Gly Leu Ala His Leu Ser Cys Ala
      180                      185                      190

Ser Ile Lys Ile Asn Ile Ile Tyr Gly Leu Cys Ala Ile Cys Asn Leu
      195                      200                      205

Val Phe Asp Ile Thr Val Ile Ala Leu Ser Tyr Val His Ile Leu Cys
      210                      215                      220

Ala Val Phe Arg Leu Pro Thr His Glu Pro Arg Leu Lys Ser Leu Ser
      225                      230                      235                      240

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Thr Cys Gly Ser His Val Cys Val Ile Leu Ala Phe Tyr Thr Pro Ala
 245 250 255
 Leu Phe Ser Phe Met Thr His Cys Phe Gly Arg Asn Val Pro Arg Tyr
 260 265 270
 Ile His Ile Leu Leu Ala Asn Leu Tyr Val Val Val Pro Pro Met Leu
 275 280 285
 Asn Pro Val Ile Tyr Gly Val Arg Thr Lys Gln Ile Tyr Lys Cys Val
 290 295 300
 Lys Lys Ile Leu Leu Gln Glu Gln Gly Met Glu Lys Glu Glu Tyr Leu
 305 310 315 320
 Ile His Thr Arg Phe
 325

<210> 110
 <211> 978
 <212> DNA
 <213> Homo sapiens

<400> 110
 atgttccttc ccaatgacac ccagtttcac cctcctcctt tcctgttgct ggggatccca 60
 ggactagaaa cacttcacat ctggatcggc tttcccttct gtgctgtgta catgatcgca 120
 ctcataggga acttcactat tctacttggt atcaagactg acagcagcct acaccagccc 180
 atgttctact tcttgcccat gttggccacc actgatgtgg gtctctcaac agctaccatc 240
 cctaagatgc ttggaatctt ctggatcaac ctcagaggga tcatctttga agcctgcctc 300
 acccagatgt tttttatcca caacttcaca cttatggagt cagcagtcct tgtggcaatg 360
 gcttatgaca gctatgtggc catctgcaat ccactccaat atagcgccat cctcaccaac 420
 aagggtgttt ctgtgattgg tcttggtgtg tttgtgaggg ctttaatttt cgtcattccc 480
 tctatacttc ttatatggcg gttgcccttc tgtgggaatc atgtaattcc ccacacctac 540
 tgtgagcaca tgggtcttgc tcatctatct tgtgccagca tcaaaatcaa tattatttat 600
 ggtttatgtg ccatttgtaa tctgggtgtt gacatcacag tcattgccct ctcttatgtg 660
 catattcttt gtgctgtttt ccgtcttctt actcatgagc cccgactcaa gtcctcagc 720
 acatgtggtt cacatgtgtg tgtaatcctt gccttctata caccagccct cttttccttt 780
 atgactcatt gctttggccg aaatgtgccc cgctatatcc atatactcct agccaatctc 840
 tatgttggtg tgccaccaat gctcaatcct gtcatatatg gagtcagaac caagcagatc 900
 tataaatgtg taaagaaaat attattgcag gaacaaggaa tggaaaagga agagtaccta 960
 atacatacga ggttctga 978

<210> 111
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 111
 Met Ser Ile Ile Asn Thr Ser Tyr Val Glu Ile Thr Thr Phe Phe Leu
 1 5 10 15
 Val Gly Met Pro Gly Leu Glu Tyr Ala His Ile Trp Ile Ser Ile Pro
 20 25 30
 Ile Cys Ser Met Tyr Leu Ile Ala Ile Leu Gly Asn Gly Thr Ile Leu
 35 40 45
 Phe Ile Ile Lys Thr Glu Pro Ser Leu His Gly Pro Met Tyr Tyr Phe

50	55	60
Leu Ser Met Leu Ala Met Ser Asp Leu Gly Leu Ser Leu Ser Ser Leu		
65	70	75 80
Pro Thr Val Leu Ser Ile Phe Leu Phe Asn Ala Pro Glu Thr Ser Ser		
	85	90 95
Ser Ala Cys Phe Ala Gln Glu Phe Phe Ile His Gly Phe Ser Val Leu		
	100	105 110
Glu Ser Ser Val Leu Leu Ile Met Ser Phe Asp Arg Phe Leu Ala Ile		
	115	120 125
His Asn Pro Leu Arg Tyr Thr Ser Ile Leu Thr Thr Val Arg Val Ala		
	130	135 140
Gln Ile Gly Ile Val Phe Ser Phe Lys Ser Met Leu Leu Val Leu Pro		
145	150	155 160
Phe Pro Phe Thr Leu Arg Ser Leu Arg Tyr Cys Lys Lys Asn Gln Leu		
	165	170 175
Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Ser		
	180	185 190
Asp Asn Arg Ile Asp Val Ile Tyr Gly Phe Phe Gly Ala Leu Cys Leu		
	195	200 205
Met Val Asp Phe Ile Leu Ile Ala Val Ser Tyr Thr Leu Ile Leu Lys		
	210	215 220
Thr Val Pro Gly Ile Ala Ser Lys Lys Glu Glu Leu Lys Ala Leu Asn		
225	230	235 240
Thr Cys Val Ser His Ile Cys Ala Val Ile Ile Phe Tyr Leu Pro Ile		
	245	250 255
Ile Asn Leu Ala Val Val His Arg Phe Ala Gly His Val Ser Pro Leu		
	260	265 270
Ile Asn Val Leu Met Ala Asn Val Leu Leu Leu Val Pro Pro Leu Met		
	275	280 285
Lys Pro Ile Val Tyr Cys Val Lys Thr Lys Gln Ile Arg Val Arg Val		
	290	295 300
Val Ala Lys Leu Cys Gln Trp Lys Ile		
305	310	

<210> 112

<211> 942

<212> DNA

<213> Homo sapiens

<400> 112

atgtccatta tcaacacatc atatgttgaa atcaccacct tcttcttggt tgggatgccca 60
 gggctagaat atgcacacat ctggatctct atcccatct gcagcatgta tcttattgct 120
 attctaggaa atggcaccat tctttttatc atcaagacag agccctcctt gcatgggccc 180
 atgtactatt ttctttccat gttggctatg tcagacttgg gtttgtcttt atcatctctg 240

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cccactgtgt taagcatctt cctgttcaat gcccctgaaa cttcttctag tgcctgcttt 300
gccaggaat tcttcattca tggattctca gtactggagt cctcagtcct cctgatcatg 360
tcatttgata gattcctagc catccacaat cctctgagat acacctcaat cctgacaact 420
gtcagagttg cccaaatagg gatagtattc tcctttaaga gcatgctcct ggttcttccc 480
ttccctttca ctttaagaag cttgagatat tgcaagaaaa accaattatc ccattcctac 540
tgtctccacc aggatgtcat gaagttggcc tgttctgaca acagaattga tgttatctat 600
ggcttttttg gagcactctg ccttatggta gactttattc tcattgctgt gtcttacacc 660
ctgatcctca agactgtacc gggaattgca tccaaaaagg aggagcttaa ggctctcaat 720
acttggtgtt cacacatctg tgcagtgatc atcttctacc tgcccatcat caacctggcc 780
gttggtccacc gctttgccgg gcatgtctct cccctcatta atgttctcat ggcaaagtgt 840
ctcctacttg tacctcgcgt gatgaaacca attgtttatt gtgtaaaaaac taaacagatt 900
agagtgagag ttgtagcaaa attgtgtcaa tggaagattt aa 942

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<210> 113
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 113

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Met Phe Tyr His Asn Lys Ser Ile Phe His Pro Val Thr Phe Phe Leu
  1              5              10              15

Ile Gly Ile Pro Gly Leu Glu Asp Phe His Met Trp Ile Ser Gly Pro
      20              25              30

Phe Cys Ser Val Tyr Leu Val Ala Leu Leu Gly Asn Ala Thr Ile Leu
      35              40              45

Leu Val Ile Lys Val Glu Gln Thr Leu Arg Glu Pro Met Phe Tyr Phe
      50              55              60

Leu Ala Ile Leu Ser Thr Ile Asp Leu Ala Leu Ser Ala Thr Ser Val
      65              70              75              80

Pro Arg Met Leu Gly Ile Phe Trp Phe Asp Ala His Glu Ile Asn Tyr
      85              90              95

Gly Ala Cys Val Ala Gln Met Phe Leu Ile His Ala Phe Thr Gly Met
      100              105              110

Glu Ala Glu Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
      115              120              125

Cys Ala Pro Leu His Tyr Ala Thr Ile Leu Thr Ser Leu Val Leu Val .
      130              135              140

Gly Ile Ser Met Cys Ile Val Ile Arg Pro Val Leu Leu Thr Leu Pro
      145              150              155              160

Met Val Tyr Leu Ile Tyr Arg Leu Pro Phe Cys Gln Ala His Ile Ile
      165              170              175

Ala His Ser Tyr Cys Glu His Met Gly Ile Ala Lys Leu Ser Cys Gly
      180              185              190

Asn Ile Arg Ile Asn Gly Ile Tyr Gly Leu Phe Val Val Ser Phe Phe
      195              200              205

Val Leu Asn Leu Val Leu Ile Gly Ile Ser Tyr Val Tyr Ile Leu Arg
      210              215              220

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Ala Val Phe Arg Leu Pro Ser His Asp Ala Gln Leu Lys Ala Leu Ser
 225 230 235 240

Thr Cys Gly Ala His Val Gly Val Ile Cys Val Phe Tyr Ile Pro Ser
 245 250 255

Val Phe Ser Phe Leu Thr His Arg Phe Gly His Gln Ile Pro Gly Tyr
 260 265 270

Ile His Ile Leu Val Ala Asn Leu Tyr Leu Ile Ile Pro Pro Ser Leu
 275 280 285

Asn Pro Ile Ile Tyr Gly Val Arg Thr Lys Gln Ile Arg Glu Arg Val
 290 295 300

Leu Tyr Val Phe Thr Lys Lys
 305 310

<210> 114
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 114
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 ggtctggaag acttccacat gtggatctcc gggcctttct gctctgttta ccttgtggct 120
 ttgctgggca atgccacat tctgctagtc atcaaggtag aacagactct ccgggagccc 180
 atgttctact tcctggccat tctttccact attgatttgg ccctttctgc aacctctgtg 240
 cctcgcatgc tgggtatctt ctggtttgat gctcacgaga ttaactatgg agcttgtgtg 300
 gccagatgt ttctgatcca tgccttcact ggcattggagg ctgaggtctt actggctatg 360
 gcttttgacc gttatgtggc catctgtgct ccactacatt acgcaaccat cttgacatcc 420
 ctagtgttgg tgggcattag catgtgcatt gtaattcgtc ccgttttact tacacttccc 480
 atggtctatc ttatctaccg cctacccttt tgtcaggctc acataatagc ccattcctac 540
 tgtgagcaca tgggcattgc aaaattgtcc tgtggaaaca ttcgtatcaa tgggtatctat 600
 gggctttttg tagtttcttt ctttgttctg aacctgggtg tcattggcat ctcgtatgtt 660
 tacattctcc gtgctgtctt ccgcctccca tcacatgatg ctacagctaaa agccctaagc 720
 acgtgtggcg ctcatgttgg agtcatctgt gttttctata tcccttcagt cttctctttc 780
 cttactcatc gatttggaca ccaaatacca ggttacattc acattcttgt tgccaatctc 840
 tatttgatta tcccaccctc tctcaacccc atcatttatg ggggtgaggac caaacagatt 900
 cgagagcgag tgctctatgt ttttactaaa aaataa 936

<210> 115
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 115
 Met Ser Ile Ile Asn Thr Ser Tyr Val Glu Ile Thr Thr Phe Phe Leu
 1 5 10 15

Val Gly Met Pro Gly Leu Glu Tyr Ala His Ile Trp Ile Ser Ile Pro
 20 25 30

Ile Cys Ser Met Tyr Leu Ile Ala Ile Leu Gly Asn Gly Thr Ile Leu
 35 40 45

Phe Ile Ile Lys Thr Glu Pro Ser Leu His Glu Pro Met Tyr Tyr Phe
 50 55 60

Leu Ser Met Leu Ala Met Ser Asp Leu Gly Leu Ser Leu Ser Ser Leu
 65 70 75 80
 Pro Thr Val Leu Ser Ile Phe Leu Phe Asn Ala Pro Glu Ile Ser Ser
 85 90 95
 Asn Ala Cys Phe Ala Gln Glu Phe Phe Ile His Gly Phe Ser Val Leu
 100 105 110
 Glu Ser Ser Val Leu Leu Ile Met Ser Phe Asp Arg Phe Leu Ala Ile
 115 120 125
 His Asn Pro Leu Arg Tyr Thr Ser Ile Leu Thr Thr Val Arg Val Ala
 130 135 140
 Gln Ile Gly Ile Val Phe Ser Phe Lys Ser Met Leu Leu Val Leu Pro
 145 150 155 160
 Phe Pro Phe Thr Leu Arg Asn Leu Arg Tyr Cys Lys Lys Asn Gln Leu
 165 170 175
 Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Ser
 180 185 190
 Asp Asn Arg Ile Asp Val Ile Tyr Gly Phe Phe Gly Ala Leu Cys Leu
 195 200 205
 Met Val Asp Phe Ile Leu Ile Ala Val Ser Tyr Thr Leu Ile Leu Lys
 210 215 220
 Thr Val Leu Gly Ile Ala Ser Lys Lys Glu Gln Leu Lys Ala Leu Asn
 225 230 235 240
 Thr Cys Val Ser His Ile Cys Ala Val Ile Ile Phe Tyr Leu Pro Ile
 245 250 255
 Ile Asn Leu Ala Val Val His Arg Phe Ala Arg His Val Ser Pro Leu
 260 265 270
 Ile Asn Val Leu Met Ala Asn Val Leu Leu Leu Val Pro Pro Leu Thr
 275 280 285
 Asn Pro Ile Val Tyr Cys Val Lys Thr Lys Gln Ile Arg Val Arg Val
 290 295 300
 Val Ala Lys Leu Cys Gln Arg Lys Ile
 305 310

<210> 116
 <211> 942
 <212> DNA
 <213> Homo sapiens

<400> 116
 atgtccatta tcaacacatc atatgttgaa atcaccacct tcttcttggt tgggatgccca 60
 gggctagaat atgcacacat ctggatctct atccccatct gcagcatgta tcttattgct 120
 attctaggaa atggcaccat tctttttatc atcaagacag agccctcctt gcatgagccc 180
 atgtactatt ttctttccat gttggetatg tcagacttgg gtttgtcttt atcatctctg 240
 cccactgtgt taagcatctt cctgttcaat gctcctgaaa tttcatccaa tgctgtcttt 300

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gccaggaat tcttcattca tggattctca gtactggagt cctcagtcct cctgatcatg 360
tcatttgata gattcctagc catccacaac cctctgagat acacctcaat cctgacaact 420
gtcagagttg cccaaatagg gatagtattc tcctttaaga gcatgctcct ggttcttccc 480
ttccctttca ctttaagaaa cttgagatat tgcaagaaaa accaattatc ccattcctac 540
tgtctccacc aggatgtcat gaagttggcc tgttctgaca acagaattga tgttatctat 600
ggcttttttg gagcactctg ccttatggta gactttattc tcattgctgt gtcttacacc 660
ctgatcctca agactgtact gggaattgca tccaaaaagg agcagcttaa ggctctcaat 720
acttgtgttt cacacatctg tgcagtgatc atcttctacc tgcccatcat caacctggcc 780
gttgtccacc gctttgcccg gcatgtctct cccctcatta atgttctcat ggcaaatgtt 840
ctcctacttg tacctccact gacgaacca attgtttatt gtgtaaaaac taaacagatt 900
agagtgagag ttgtagcaaa attgtgtcaa cggaagattt aa 942

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<210> 117
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 117

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Met Thr Ile Leu Leu Asn Ser Ser Leu Gln Arg Ala Thr Phe Phe Leu
  1              5              10              15

Thr Gly Phe Gln Gly Leu Glu Gly Leu His Gly Trp Ile Ser Ile Pro
      20              25              30

Phe Cys Phe Ile Tyr Leu Thr Val Ile Leu Gly Asn Leu Thr Ile Leu
      35              40              45

His Val Ile Cys Thr Asp Ala Thr Leu His Gly Pro Met Tyr Tyr Phe
      50              55              60

Leu Gly Met Leu Ala Val Thr Asp Leu Gly Leu Cys Leu Ser Thr Leu
      65              70              75              80

Pro Thr Val Leu Gly Ile Phe Trp Phe Asp Thr Arg Glu Ile Gly Ile
      85              90              95

Pro Ala Cys Phe Thr Gln Leu Phe Phe Ile His Thr Leu Ser Ser Met
      100              105              110

Glu Ser Ser Val Leu Leu Ser Met Ser Ile Asp Arg Ser Val Ala Val
      115              120              125

Cys Asn Pro Leu His Asp Ser Thr Val Leu Thr Pro Ala Cys Ile Val
      130              135              140

Lys Met Gly Leu Ser Ser Val Leu Arg Ser Ala Leu Leu Ile Leu Pro
      145              150              155              160

Leu Pro Phe Leu Leu Lys Arg Phe Gln Tyr Cys His Ser His Val Leu
      165              170              175

Ala His Ala Tyr Cys Leu His Leu Glu Ile Met Lys Leu Ala Cys Ser
      180              185              190

Ser Ile Ile Val Asn His Ile Tyr Gly Leu Phe Val Val Ala Cys Thr
      195              200              205

Val Gly Val Asp Ser Leu Leu Ile Phe Leu Ser Tyr Ala Leu Ile Leu
      210              215              220

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Arg Thr Val Leu Ser Ile Ala Ser His Gln Glu Arg Leu Arg Ala Leu
 225 230 235 240

Asn Thr Cys Val Ser His Ile Cys Ala Val Leu Leu Phe Tyr Ile Pro
 245 250 255

Met Ile Gly Leu Ser Leu Val His Arg Phe Gly Glu His Leu Pro Arg
 260 265 270

Val Val His Leu Phe Met Ser Tyr Val Tyr Leu Leu Val Pro Pro Leu
 275 280 285

Met Asn Pro Ile Ile Tyr Ser Ile Lys Thr Lys Gln Ile Arg Gln Arg
 290 295 300

Ile Ile Lys Lys Phe Gln Phe Ile Lys Ser Leu Arg Cys Phe Trp Lys
 305 310 315 320

Asp

<210> 118
 <211> 966
 <212> DNA
 <213> Homo sapiens

<400> 118
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 cccactgtgc tgggcatttt ctgggttgat accagagaga ttggcatccc tgccgtgttc 300
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 gcatgtattg tcaagatggg gctaagctca gtgcttagaa gtgctctcct catcctcccc 480
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 gccctcatcc ttcgcaccgt gctcagcatt gcctcccacc aggagcgact ccgagccctc 720
 aacacctgtg tctctcatat ctgtgctgta ctgctcttct acatcccat gattggcttg 780
 tctcttgtgc atcgttttg tgaacatctg ccccgctgtg tacacctctt catgtcctat 840
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 gattaa 966

<210> 119
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 119
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Ser Phe Leu Leu Leu Gly Ile Pro Gly Leu Glu Asp Val His Ile Trp
 20 25 30

Ile Gly Val Pro Phe Phe Phe Val Tyr Leu Val Ala Leu Leu Gly Asn
 35 40 45

Thr	Ala	Leu	Leu	Phe	Val	Ile	Gln	Thr	Glu	Gln	Ser	Leu	His	Glu	Pro	50	55	60
Met	Tyr	Tyr	Phe	Leu	Ala	Met	Leu	Asp	Ser	Ile	Asp	Leu	Gly	Leu	Ser	65	70	75
Thr	Ala	Thr	Ile	Pro	Lys	Met	Leu	Gly	Ile	Phe	Trp	Phe	Asn	Thr	Lys	85	90	95
Glu	Ile	Ser	Phe	Gly	Gly	Cys	Leu	Ser	His	Met	Phe	Phe	Ile	His	Phe	100	105	110
Phe	Thr	Ala	Met	Glu	Ser	Ile	Val	Leu	Val	Ala	Met	Ala	Phe	Asp	Arg	115	120	125
Tyr	Ile	Ala	Ile	Cys	Lys	Pro	Leu	Arg	Tyr	Thr	Met	Ile	Leu	Thr	Ser	130	135	140
Lys	Ile	Ile	Ser	Leu	Ile	Ala	Gly	Ile	Ala	Val	Leu	Arg	Ser	Leu	Tyr	145	150	155
Met	Val	Val	Pro	Leu	Val	Phe	Leu	Leu	Leu	Arg	Leu	Pro	Phe	Cys	Gly	165	170	175
His	Arg	Ile	Ile	Pro	His	Thr	Tyr	Cys	Glu	His	Met	Gly	Ile	Ala	Arg	180	185	190
Leu	Ala	Cys	Ala	Ser	Ile	Lys	Val	Asn	Ile	Arg	Phe	Gly	Leu	Gly	Asn	195	200	205
Ile	Ser	Leu	Leu	Leu	Leu	Asp	Val	Ile	Leu	Ile	Ile	Leu	Ser	Tyr	Val	210	215	220
Arg	Ile	Leu	Tyr	Ala	Val	Phe	Cys	Leu	Pro	Ser	Trp	Glu	Ala	Arg	Leu	225	230	235
Lys	Ala	Leu	Asn	Thr	Cys	Gly	Ser	His	Ile	Gly	Val	Ile	Leu	Ala	Phe	245	250	255
Phe	Thr	Pro	Ala	Phe	Phe	Ser	Phe	Leu	Thr	His	Arg	Phe	Gly	His	Asn	260	265	270
Ile	Pro	Gln	Tyr	Ile	His	Ile	Ile	Leu	Ala	Asn	Leu	Tyr	Val	Val	Val	275	280	285
Pro	Pro	Ala	Leu	Asn	Pro	Val	Ile	Tyr	Gly	Val	Arg	Thr	Lys	Gln	Ile	290	295	300
Arg	Glu	Arg	Val	Leu	Arg	Ile	Phe	Leu	Lys	Thr	Asn	His				305	310	315

<210> 120

<211> 954

<212> DNA

<213> Homo sapiens

<400> 120

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tatcttggtg	cactcctggg	aaacactgct	ctcttggttg	tgatccagac	tgagcagagt	180
ctccatgagc	ctatgtacta	cttcctggcc	atgttggtt	ccattgacct	gggcttgtct	240
acagccacca	tcccaaaat	gttgggcac	ttctggttca	ataccaaaga	aatatctttt	300
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cctcatactt	attgtgagca	catgggcatt	gcccgtctgg	cctgtgccag	catcaaagtc	600
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ttagccaacc	tgtatgtggt	tgtcccacca	gccctcaatc	ctgtaatcta	tggagtcagg	900
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<210> 121
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 121

Met	Ser	Phe	Leu	Asn	Gly	Thr	Ser	Leu	Thr	Pro	Ala	Ser	Phe	Ile	Leu	1	5	10	15
Asn	Gly	Ile	Pro	Gly	Leu	Glu	Asp	Val	His	Leu	Trp	Ile	Ser	Phe	Pro	20	25	30	
Leu	Cys	Thr	Met	Tyr	Ser	Ile	Ala	Ile	Thr	Gly	Asn	Phe	Gly	Leu	Met	35	40	45	
Tyr	Leu	Ile	Tyr	Cys	Asp	Glu	Ala	Leu	His	Arg	Pro	Met	Tyr	Val	Phe	50	55	60	
Leu	Ala	Leu	Leu	Ser	Phe	Thr	Asp	Val	Leu	Met	Cys	Thr	Ser	Thr	Leu	65	70	75	80
Pro	Asn	Thr	Leu	Phe	Ile	Leu	Trp	Phe	Asn	Leu	Lys	Glu	Ile	Asp	Phe	85	90	95	
Lys	Ala	Cys	Leu	Ala	Gln	Met	Phe	Phe	Val	His	Thr	Phe	Thr	Gly	Met	100	105	110	
Glu	Ser	Gly	Val	Leu	Met	Leu	Met	Ala	Leu	Asp	His	Cys	Val	Ala	Ile	115	120	125	
Cys	Phe	Pro	Leu	Arg	Tyr	Ala	Thr	Ile	Leu	Thr	Asn	Ser	Val	Ile	Ala	130	135	140	
Lys	Ala	Gly	Phe	Leu	Thr	Phe	Leu	Arg	Gly	Val	Met	Leu	Val	Ile	Pro	145	150	155	160
Ser	Thr	Phe	Leu	Thr	Lys	Arg	Leu	Pro	Tyr	Cys	Lys	Gly	Asn	Val	Ile	165	170	175	
Pro	His	Thr	Tyr	Cys	Asp	His	Met	Ser	Val	Ala	Lys	Ile	Ser	Cys	Gly	180	185	190	
Asn	Val	Arg	Val	Asn	Ala	Ile	Tyr	Gly	Leu	Ile	Val	Ala	Leu	Leu	Ile	195	200	205	

Gly Gly Phe Asp Ile Leu Cys Ile Thr Ile Ser Tyr Thr Met Ile Leu
 210 215 220
 Gln Ala Val Val Ser Leu Ser Ser Ala Asp Ala Arg Gln Lys Ala Phe
 225 230 235 240
 Ser Thr Cys Thr Ala His Phe Cys Ala Ile Val Leu Thr Tyr Val Pro
 245 250 255
 Ala Phe Phe Thr Phe Phe Thr His His Phe Gly Gly His Thr Ile Pro
 260 265 270
 Leu His Ile His Ile Ile Met Ala Asn Leu Tyr Leu Leu Met Pro Pro
 275 280 285
 Thr Met Asn Pro Ile Val Tyr Gly Val Lys Thr Arg Gln Val Arg Glu
 290 295 300
 Ser Val Ile Arg Phe Phe Leu Lys Gly Lys Asp Asn Ser His Asn Phe
 305 310 315 320

<210> 122
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 122
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<210> 123
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 123
 Met Ser Gly Asp Asn Ser Ser Ser Leu Thr Pro Gly Phe Phe Ile Leu
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 Asn Gly Val Pro Gly Leu Glu Ala Thr His Ile Trp Ile Ser Leu Pro
 20 25 30
 Phe Cys Phe Met Tyr Ile Ile Ala Val Val Gly Asn Cys Gly Leu Ile
 35 40 45

Cys Leu Ile Ser His Glu Glu Ala Leu His Arg Pro Met Tyr Tyr Phe
 50 55 60
 Leu Ala Leu Leu Ser Phe Thr Asp Val Thr Leu Cys Thr Thr Met Val
 65 70 75 80
 Pro Asn Met Leu Cys Ile Phe Trp Phe Asn Leu Lys Glu Ile Asp Phe
 85 90 95
 Asn Ala Cys Leu Ala Gln Met Phe Phe Val His Met Leu Thr Gly Met
 100 105 110
 Glu Ser Gly Val Leu Met Leu Met Ala Leu Asp Arg Tyr Val Ala Ile
 115 120 125
 Cys Tyr Pro Leu Arg Tyr Ala Thr Ile Leu Thr Asn Pro Val Ile Ala
 130 135 140
 Lys Ala Gly Leu Ala Thr Phe Leu Arg Asn Val Met Leu Ile Ile Pro
 145 150 155 160
 Phe Thr Leu Leu Thr Lys Arg Leu Pro Tyr Cys Arg Gly Asn Phe Ile
 165 170 175
 Pro His Thr Tyr Cys Asp His Met Ser Val Ala Lys Val Ser Cys Gly
 180 185 190
 Asn Phe Lys Val Asn Ala Ile Tyr Gly Leu Met Val Ala Leu Leu Ile
 195 200 205
 Gly Val Phe Asp Ile Cys Cys Ile Ser Val Ser Tyr Thr Met Ile Leu
 210 215 220
 Gln Ala Val Met Ser Leu Ser Ser Ala Asp Ala Arg His Lys Ala Phe
 225 230 235 240
 Ser Thr Cys Thr Ser His Met Cys Ser Ile Val Ile Thr Tyr Val Ala
 245 250 255
 Ala Phe Phe Thr Phe Phe Thr His Arg Phe Val Gly His Asn Ile Pro
 260 265 270
 Asn His Ile His Ile Ile Val Ala Asn Leu Tyr Leu Leu Leu Pro Pro
 275 280 285
 Thr Met Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Gln Ile Gln Glu
 290 295 300
 Gly Val Ile Lys Phe Leu Leu Gly Asp Lys Val Ser Phe Thr Tyr Asp
 305 310 315 320

Lys

<210> 124
 <211> 966
 <212> DNA
 <213> Homo sapiens

<400> 124

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<210> 125

<211> 315

<212> PRT

<213> Homo sapiens

<400> 125

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      20              25              30

Leu Pro Leu Ser Leu Leu Phe Leu Leu Ala Val Gly Ala Asn Thr Thr
      35              40              45

Leu Leu Met Thr Ile Trp Leu Glu Ala Ser Leu His Gln Pro Leu Tyr
      50              55              60

Tyr Leu Leu Ser Leu Leu Ser Leu Leu Asp Ile Val Leu Cys Leu Thr
      65              70              75              80

Val Ile Pro Lys Val Leu Thr Ile Phe Trp Phe Asp Leu Arg Pro Ile
      85              90              95

Ser Phe Pro Ala Cys Phe Leu Gln Met Tyr Ile Met Asn Cys Phe Leu
      100              105              110

Ala Met Glu Ser Cys Thr Phe Met Val Met Ala Tyr Asp Arg Tyr Val
      115              120              125

Ala Ile Cys His Pro Leu Arg Tyr Pro Ser Ile Ile Thr Asp His Phe
      130              135              140

Val Val Lys Ala Ala Met Phe Ile Leu Thr Arg Asn Val Leu Met Thr
      145              150              155              160

Leu Pro Ile Pro Ile Leu Ser Ala Gln Leu Arg Tyr Cys Gly Arg Asn
      165              170              175

Val Ile Glu Asn Cys Ile Cys Ala Asn Met Ser Val Ser Arg Leu Ser
      180              185              190
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Cys Asp Asp Val Thr Ile Asn His Leu Tyr Gln Phe Ala Gly Gly Trp
 195 200 205
 Thr Leu Leu Gly Ser Asp Leu Ile Leu Ile Phe Leu Ser Tyr Thr Phe
 210 215 220
 Ile Leu Arg Ala Val Leu Arg Leu Lys Ala Glu Gly Ala Val Ala Lys
 225 230 235 240
 Ala Leu Ser Thr Cys Gly Ser His Phe Met Leu Ile Leu Phe Phe Ser
 245 250 255
 Thr Ile Leu Leu Val Phe Val Leu Thr His Val Ala Lys Lys Lys Val
 260 265 270
 Ser Pro Asp Val Pro Val Leu Leu Asn Val Leu His His Val Ile Pro
 275 280 285
 Ala Ala Leu Asn Pro Ile Ile Tyr Gly Val Arg Thr Gln Glu Ile Lys
 290 295 300
 Gln Gly Met Gln Arg Leu Leu Lys Lys Gly Cys
 305 310 315

<210> 126
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 126
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<210> 127
 <211> 359
 <212> PRT
 <213> Homo sapiens

<400> 127
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 Gly Val Val His Ser Phe Cys His Asn Met Asn Cys Asn Phe Met His
 20 25 30

Ile	Phe	Lys	Phe	Val	Leu	Asp	Phe	Asn	Met	Lys	Asn	Val	Thr	Glu	Val	35	40	45
Thr	Leu	Phe	Val	Leu	Lys	Gly	Phe	Thr	Asp	Asn	Leu	Glu	Leu	Gln	Thr	50	55	60
Ile	Phe	Phe	Phe	Leu	Phe	Leu	Ala	Ile	Tyr	Leu	Phe	Thr	Leu	Met	Gly	65	70	75
Asn	Leu	Gly	Leu	Ile	Leu	Val	Val	Ile	Arg	Asp	Ser	Gln	Leu	His	Lys	85	90	95
Pro	Met	Tyr	Tyr	Phe	Leu	Ser	Met	Leu	Ser	Ser	Val	Asp	Ala	Cys	Tyr	100	105	110
Ser	Ser	Val	Ile	Thr	Pro	Asn	Met	Leu	Val	Asp	Phe	Thr	Thr	Lys	Asn	115	120	125
Lys	Val	Ile	Ser	Phe	Leu	Gly	Cys	Val	Ala	Gln	Val	Phe	Leu	Ala	Cys	130	135	140
Ser	Phe	Gly	Thr	Thr	Glu	Cys	Phe	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	145	150	155
Arg	Tyr	Val	Ala	Ile	Tyr	Asn	Pro	Leu	Leu	Tyr	Ser	Val	Ser	Met	Ser	165	170	175
Pro	Arg	Val	Tyr	Met	Pro	Leu	Ile	Asn	Ala	Ser	Tyr	Val	Ala	Gly	Ile	180	185	190
Leu	His	Ala	Thr	Ile	His	Thr	Val	Ala	Thr	Phe	Ser	Leu	Ser	Phe	Cys	195	200	205
Gly	Ala	Asn	Glu	Ile	Arg	Arg	Val	Phe	Cys	Asp	Ile	Pro	Pro	Leu	Leu	210	215	220
Ala	Ile	Ser	Tyr	Ser	Asp	Thr	His	Thr	Asn	Gln	Leu	Leu	Leu	Phe	Tyr	225	230	235
Phe	Val	Gly	Ser	Ile	Glu	Leu	Val	Thr	Ile	Leu	Ile	Val	Leu	Ile	Ser	245	250	255
Tyr	Gly	Leu	Ile	Leu	Leu	Ala	Ile	Leu	Lys	Met	Tyr	Ser	Ala	Glu	Gly	260	265	270
Arg	Arg	Lys	Val	Phe	Ser	Thr	Cys	Gly	Ala	His	Leu	Thr	Gly	Val	Ser	275	280	285
Ile	Tyr	Tyr	Gly	Thr	Ile	Leu	Phe	Met	Tyr	Val	Arg	Pro	Ser	Ser	Ser	290	295	300
Tyr	Ala	Ser	Asp	His	Asp	Met	Ile	Val	Ser	Ile	Phe	Tyr	Thr	Ile	Val	305	310	315
Ile	Pro	Leu	Leu	Asn	Pro	Val	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	325	330	335
Lys	Asp	Ser	Met	Lys	Lys	Met	Phe	Gly	Lys	Asn	Gln	Val	Ile	Asn	Lys	340	345	350

Val Tyr Phe His Thr Lys Lys
355

<210> 128
<211> 1080
<212> DNA
<213> Homo sapiens

<400> 128
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aacatgaaga atgtcactga agttacctta tttgtactga agggcttcac agacaatctt 180
gaactgcaga ctatcttctt ctctctgttt ctagcaatct acctcttcac tctcatggga 240
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<210> 129
<211> 404
<212> PRT
<213> Homo sapiens

<400> 129
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20 25 30
Leu Lys Asn Lys Thr Glu Val Thr Met Phe Ile Leu Thr Gly Phe Thr
35 40 45
Asp Asp Phe Glu Leu Gln Val Phe Leu Phe Leu Leu Phe Phe Ala Ile
50 55 60
Tyr Leu Phe Thr Leu Ile Gly Asn Leu Gly Leu Val Val Leu Val Ile
65 70 75 80
Glu Asp Ser Trp Leu His Asn Pro Met Tyr Tyr Phe Leu Ser Val Leu
85 90 95
Ser Phe Leu Asp Ala Cys Tyr Ser Thr Val Val Thr Pro Lys Met Leu
100 105 110
Val Asn Phe Leu Ala Lys Asn Lys Ser Ile Ser Phe Ile Gly Cys Ala
115 120 125
Thr Met Asp Ser Thr Phe Thr Gly Tyr Asn Leu Tyr Asn Leu Gln Val

130	135	140
Lys Thr Glu Met Asp	Lys Leu Ser Ser Gly	Leu Asp Ile Tyr Arg Asn
145	150	155 160
Pro Leu Lys Asn Lys	Thr Glu Val Thr Met Phe	Ile Leu Thr Gly Phe
	165	170 175
Thr Asp Asp Phe Glu	Leu Gln Val Phe Leu Phe	Leu Leu Phe Phe Ala
	180	185 190
Ile Gln Met Leu Leu	Phe Val Thr Phe Gly Thr	Thr Glu Cys Phe Leu
	195	200 205
Leu Ala Ala Met Ala	Tyr Asp His Tyr Val	Ala Ile Tyr Asn Pro Leu
	210	215 220
Leu Tyr Ser Val Ser	Met Ser Pro Arg Val	Tyr Val Pro Leu Ile Thr
	225	230 235 240
Ala Ser Tyr Val Ala	Gly Ile Leu His Ala	Thr Ile His Ile Val Ala
	245	250 255
Thr Phe Ser Leu Ser	Phe Cys Gly Ser Asn	Glu Ile Arg His Val Phe
	260	265 270
Cys Asp Met Pro Pro	Leu Leu Ala Ile Ser	Cys Ser Asp Thr His Thr
	275	280 285
Asn Gln Leu Leu Leu	Phe Tyr Phe Val Gly	Ser Ile Glu Ile Val Thr
	290	295 300
Ile Leu Ile Val Leu	Ile Ser Cys Asp Phe	Ile Leu Leu Ser Ile Leu
	305	310 315 320
Lys Met His Ser Ala	Lys Gly Arg Gln Lys	Ala Phe Ser Thr Cys Gly
	325	330 335
Ser His Leu Thr Gly	Val Thr Ile Tyr His	Gly Thr Ile Leu Val Ser
	340	345 350
Tyr Met Arg Pro Ser	Ser Ser Tyr Ala Ser	Asp His Asp Ile Ile Val
	355	360 365
Ser Ile Phe Tyr Thr	Ile Val Ile Pro Lys	Leu Asn Pro Ile Ile Tyr
	370	375 380
Ser Leu Arg Asn Lys	Glu Val Lys Lys Ala	Val Lys Lys Met Leu Lys
	385	390 395 400
Leu Val Tyr Lys		

<210> 130
 <211> 1023
 <212> DNA
 <213> Homo sapiens

<400> 130
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165	170	175
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180	185	190
Val Tyr Pro Leu Leu Lys Leu Ala Cys Ser Asn Ile His Met Ile Gly		
195	200	205
Leu Leu Val Ile Ala Asn Ser Gly Leu Ile Ala Leu Val Thr Phe Val		
210	215	220
Val Leu Leu Leu Ser Tyr Val Phe Ile Leu Tyr Thr Ile Arg Ala Tyr		
225	230	235
Ser Ala Glu Arg Arg Ser Lys Ala Leu Ala Thr Cys Ser Ser His Val		
245	250	255
Ile Val Val Val Leu Phe Phe Ala Pro Ala Leu Phe Ile Tyr Ile Arg		
260	265	270
Pro Val Thr Thr Phe Ser Glu Asp Lys Val Phe Ala Leu Phe Tyr Thr		
275	280	285
Ile Ile Ala Pro Met Phe Asn Pro Leu Ile Tyr Thr Leu Arg Asn Thr		
290	295	300
Glu Met Lys Asn Ala Met Arg Lys Val Trp Cys Cys Gln Ile Leu Leu		
305	310	315
Lys Arg Asn Gln Leu Phe		
325		

<210> 104
 <211> 981
 <212> DNA
 <213> Homo sapiens

<400> 104
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 gtattatttt tgttttgcta cattgctatt tggatgggaa acttactcat aatgatttct 180
 atcacgtgca cccagctcat tcaccaaccc atgtatttct tcctcaatta cctctcactc 240
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 agaaagacca tttctataaa taactgtatg atacaactct ttaccacca tttttttgga 360
 ggcatagaga tcttcattct cacagggatg gcctatgacc gctatgtggc catttgcaag 420
 cccctgcact acaccattat tatgagcagg caaaagtgtg acacaatcat catagtgtgt 480
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 tgtggcccaa atgagataga tcactacttc tgtgatgtgt atcctttgct gaaattggcc 600
 tgttctaata tacacatgat aggtctctta gtcattgcta attcaggctt aattgctttg 660
 gtgacatttg ttgtcttggt gttgtcttat gtttttatat tgtataccat cagagcatac 720
 tctgcagaga gacgcagcaa agctcttgcc acttgtagtt ctcatgtaat tgttgtggtc 780
 ctgttttttg ctctgcatt gttcatttac attagaccgg tcacaacatt ctcagaagat 840
 aaagtgtttg ccctttttta taccatcatt gctcccatgt tcaaccctct catatacacg 900
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 aaaagaaatc aacttttctg a 981

<210> 105
 <211> 370
 <212> PRT

<213> Homo sapiens

<400> 105

Met	Phe	Ser	Met	Thr	Thr	Glu	Ala	Leu	Asn	Asn	Phe	Ala	Leu	Gly	Cys	
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Thr	Asn	Leu	Leu	Met	Thr	Met	Ile	Pro	Gln	Ile	Asp	Leu	Lys	Gln	Ile	
			20					25					30			
Phe	Leu	Cys	Pro	Asn	Cys	Arg	Leu	Tyr	Met	Ile	Pro	Val	Gly	Ala	Phe	
		35					40					45				
Ile	Phe	Ser	Leu	Gly	Asn	Met	Gln	Asn	Gln	Ser	Phe	Val	Thr	Glu	Phe	
	50					55					60					
Val	Leu	Leu	Gly	Leu	Ser	Gln	Asn	Pro	Asn	Val	Gln	Glu	Ile	Val	Phe	
65					70					75					80	
Val	Val	Phe	Leu	Phe	Val	Tyr	Ile	Ala	Thr	Val	Gly	Gly	Asn	Met	Leu	
				85					90					95		
Ile	Val	Val	Thr	Ile	Leu	Ser	Ser	Pro	Ala	Leu	Leu	Val	Ser	Pro	Met	
			100					105					110			
Tyr	Phe	Phe	Leu	Gly	Phe	Leu	Ser	Phe	Leu	Asp	Ala	Cys	Phe	Ser	Ser	
		115					120					125				
Val	Ile	Thr	Pro	Lys	Met	Ile	Val	Asp	Ser	Leu	Tyr	Val	Thr	Lys	Thr	
	130					135					140					
Ile	Ser	Phe	Glu	Gly	Cys	Met	Met	Gln	Leu	Phe	Ala	Glu	His	Phe	Phe	
145					150					155					160	
Ala	Gly	Val	Glu	Val	Ile	Val	Leu	Thr	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	
				165				170						175		
Val	Ala	Ile	Cys	Lys	Pro	Leu	His	Tyr	Ser	Ser	Ile	Met	Asn	Arg	Arg	
			180					185					190			
Leu	Cys	Gly	Ile	Leu	Met	Gly	Val	Ala	Trp	Thr	Gly	Gly	Leu	Leu	His	
		195					200					205				
Ser	Met	Ile	Gln	Ile	Leu	Phe	Thr	Phe	Gln	Leu	Pro	Phe	Cys	Gly	Pro	
	210					215					220					
Asn	Val	Ile	Asn	His	Phe	Met	Cys	Asp	Leu	Tyr	Pro	Leu	Leu	Glu	Leu	
225					230					235					240	
Ala	Cys	Thr	Asp	Thr	His	Ile	Phe	Gly	Leu	Met	Val	Val	Ile	Asn	Ser	
				245					250					255		
Gly	Phe	Ile	Cys	Ile	Ile	Asn	Phe	Ser	Leu	Leu	Leu	Val	Ser	Tyr	Ala	
			260					265					270			
Val	Ile	Leu	Leu	Ser	Leu	Arg	Thr	His	Ser	Ser	Glu	Gly	Arg	Trp	Lys	
		275					280					285				
Ala	Leu	Ser	Thr	Cys	Gly	Ser	His	Ile	Ala	Val	Val	Ile	Leu	Phe	Phe	
	290					295					300					
Val	Pro	Cys	Ile	Phe	Val	Tyr	Thr	Arg	Pro	Pro	Ser	Ala	Phe	Ser	Leu	

[illegible]

<400> 106						
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tacatgatcc	ctgttgagc	tttcatcttt	tccttgggaa	acatgcaaaa	ccaaagcttt	180
gtaactgagt	ttgtcctcct	gggactttca	cagaatccaa	atgttcagga	aatagtatatt	240
gttgatattt	tgtttgtcta	cattgcaact	gttgggggca	acatgctaata	tgtagtaacc	300
attctcagca	gccctgctct	tctgggtgtct	cctatgtact	tcttcttggg	cttccctgtcc	360
ttcctggatg	cgtgcttctc	atctgtcatc	accccaaaga	tgattgtaga	ctccctctat	420
gtgacaaaa	ccatctcttt	tgaaggctgc	atgatgcagc	tctttgtctga	acattctctt	480
gctggggttg	aggtgattgt	cctcacagcc	atggcctatg	atcgttatgt	ggccatttgc	540
aagcccttgc	attactcttc	tatcatgaac	aggaggctct	gtggcattct	gatgggggta	600
gcctggacag	ggggcctctt	gcattccatg	atacaaattc	tttttacttt	ccagcttccc	660
ttttgtggcc	ccaatgtcat	caatcacttt	atgtgtgact	tgtacccgtt	actggagctt	720
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cacagttctg	aagggcgctg	gaaagctctc	tccacctgtg	gatctcacat	tgctgtttgtg	900
attttgtttc	ttgtcccatg	catatttgtta	tatacacgac	ctccatctgc	tttttccctt	960
gacaaaattg	cggcaatat	ttatatcatc	ttaaatccct	tgctcaatcc	tttgatttac	1020
actttcagga	ataagggaagt	aaaacaggcc	atgaggagaa	tatggaacag	actgatggtg	1080
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<400> 107

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Arg	Gly	Phe	Pro	Gly	Leu	Glu	Tyr	Val	His	Ser	Trp	Leu	Ser	Ile	Leu
			20					25					30		
Phe	Cys	Leu	Ala	Tyr	Leu	Val	Ala	Phe	Met	Gly	Asn	Val	Thr	Ile	Leu
		35					40					45			
Ser	Val	Ile	Trp	Ile	Glu	Ser	Ser	Leu	His	Gln	Pro	Met	Tyr	Tyr	Phe
	50					55					60				
Ile	Ser	Ile	Leu	Ala	Val	Asn	Asp	Leu	Gly	Met	Ser	Leu	Ser	Thr	Leu

Asn His Ser Ala Glu Val Ile Lys Lys Ala Leu Ser Thr Cys Val Ser
225 230 235 240

His Ile Ile Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Met Tyr
245 250 255

Thr Cys Pro Ala Thr Val Phe Pro Met Asp Lys Met Ile Ala Val Phe
260 265 270

Tyr Thr Val Gly Thr Ser Phe Leu Asn Pro Val Ile Tyr Thr Leu Lys
275 280 285

Asn Thr Glu Val Lys Ser Ala Met Arg Lys Leu Trp Ser Lys Lys Leu
290 295 300

Ile Thr Asp Asp Lys Arg
305 310

<210> 154
<211> 933
<212> DNA
<213> Homo sapiens

<400> 154
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ttgctaataca ttattagtggt caaggccagc caggcactta agaacccaat gttcttcttc 180
cttttctact tatctttatc tgataacttg cttctctact ccatagcccc tagaatgatt 240
gtggatgccc ttttgaagaa gacaactatc tccttcagcg agtgcattgat ccaagtcttt 300
tcatcccatg tctttggctg cctggagatc ttcactctca tcctcacggc tgttgaccgc 360
tatgtggaca tctgtaagcc cctgcactac atgaccatca taagccagtg ggtctgtggt 420
gttttgatgg ctgtggcctg ggtgggattc tgtgtgcatt ctttagttca gatttttctt 480
gccctgagtt tgccattctg tggccccaat gtgatcaatc actgtttctg tgacttgcag 540
cccttggtga aacaagcctg ttcagaaacc tatgtggtta acctactcct gggtttccaat 600
agtggggcca tttgtgcagt gagttatgtc atgctaatat tctcctatgt catcttcttg 660
cattctctga gaaaccacag tgctgaagtg ataaagaaag cactttccac atgtgtctcc 720
cacatcattg tggatcattt gttctttgga ccttgcatat ttatgtacac atgccctgca 780
accgtattcc ccatggataa gatgatagct gtattttata cagttggaac atcttttctc 840
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<210> 155
<211> 347
<212> PRT
<213> Homo sapiens

<400> 155
Met Gly Asn Trp Thr Ala Ala Val Thr Glu Phe Val Leu Leu Gly Phe
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Ser Leu Ser Arg Glu Val Glu Leu Leu Leu Leu Val Leu Leu Leu Pro
20 25 30
Thr Phe Leu Leu Thr Leu Leu Gly Asn Leu Leu Ile Ile Ser Thr Val
35 40 45
Leu Ser Cys Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Asn
50 55 60

Leu Ser Ile Leu Asp Ile Leu Phe Thr Ser Val Ile Ser Pro Lys Val
65 70 75 80

Leu Ala Asn Leu Gly Ser Arg Asp Lys Thr Ile Ser Phe Ala Gly Cys
85 90 95

Ile Thr Gln Cys Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Leu
100 105 110

Leu Leu Thr Val Met Ser Tyr Asp Arg Tyr Ala Thr Ile Cys Cys Pro
115 120 125

Leu Arg Tyr Thr Thr Ile Met Arg Pro Ser Val Cys Ile Gly Thr Val
130 135 140

Val Phe Ser Trp Val Gly Gly Phe Leu Ser Val Leu Phe Pro Thr Ile
145 150 155 160

Leu Ile Ser Gln Leu Pro Phe Cys Gly Ser Asn Ile Ile Asn His Phe
165 170 175

Phe Cys Asp Ser Gly Pro Leu Leu Ala Leu Ala Cys Ala Asp Thr Thr
180 185 190

Ala Ile Glu Leu Met Asp Phe Met Leu Ser Ser Met Val Ile Leu Cys
195 200 205

Cys Ile Val Leu Val Ala Tyr Ser Tyr Thr Tyr Ile Ile Leu Thr Ile
210 215 220

Val Arg Ile Pro Ser Ala Ser Gly Arg Lys Lys Ala Phe Asn Thr Cys
225 230 235 240

Ala Ser His Leu Thr Ile Val Ile Ile Pro Ser Gly Ile Thr Val Phe
245 250 255

Ile Tyr Val Thr Pro Ser Gln Lys Glu Tyr Leu Glu Ile Asn Lys Ile
260 265 270

Pro Leu Val Leu Ser Ser Val Val Thr Pro Phe Leu Asn Pro Phe Ile
275 280 285

Tyr Thr Leu Arg Asn Asp Thr Val Gln Gly Val Leu Arg Asp Val Trp
290 295 300

Val Arg Val Arg Gly Val Phe Glu Lys Arg Met Arg Ala Val Leu Arg
305 310 315 320

Ser Arg Leu Ser Ser Asn Lys Asp His Gln Gly Arg Ala Cys Ser Ser
325 330 335

Pro Pro Cys Val Tyr Ser Val Lys Leu Gln Cys
340 345

<210> 156

<211> 1044

<212> DNA

<213> Homo sapiens

<400> 156

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aacctgctca tcatctccac tgtgctgtcc tgctcccgcc tccacacccc catgtacttc 180
ttcttgtgca acctctctat cctggacatc ctcttcacct cagtcattctc tccaaaagtg 240
ttggccaact taggatctag ggataaaacc atctcctttg ccggaatgat caccagtgac 300
tatttctact ttttcttggg cacagttgag ttctctctgc tgacgggtcat gtcctatgac 360
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attgggaccg ttgtattctc ttgggtggga ggcttctctg ctgtgctctt tccaaccatc 480
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gcttcccacc tgaccatagt catcattcct agtggcatca ctgtgtttat ctatgtgact 780
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actccattcc tcaaccctt tatataact ctgaggaatg acacagtgc gggagtcctc 900
agggatgtgt gggtcagggt tcgaggagtt tttgaaaaga ggatgagggc agtgctgaga 960
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tattctgtaa agctccagtg ttag 1044

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<210> 157
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 157

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Met Gly Ala Lys Asn Asn Val Thr Glu Phe Val Leu Phe Gly Leu Phe
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Glu Ser Arg Glu Met Gln His Thr Cys Phe Val Val Phe Phe Leu Phe
      20              25              30

His Val Leu Thr Val Leu Gly Asn Leu Leu Val Ile Ile Thr Ile Asn
      35              40              45

Ala Arg Lys Thr Leu Lys Ser Pro Met Tyr Phe Phe Leu Ser Gln Leu
      50              55              60

Ser Phe Ala Asp Ile Cys Tyr Pro Ser Thr Thr Ile Pro Lys Met Ile
      65              70              75              80

Ala Asp Thr Phe Val Glu His Lys Ile Ile Ser Phe Asn Gly Cys Met
      85              90              95

Thr Gln Leu Phe Ser Ala His Phe Phe Gly Gly Thr Glu Ile Phe Leu
      100             105             110

Leu Thr Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Arg Pro Leu
      115             120             125

His Tyr Thr Ala Ile Met Asp Cys Arg Lys Cys Gly Leu Leu Ala Gly
      130             135             140

Ala Ser Trp Leu Ala Gly Phe Leu His Ser Ile Leu Gln Thr Leu Leu
      145             150             155             160

Thr Val Gln Leu Pro Phe Cys Gly Pro Asn Glu Ile Asp Asn Phe Phe
      165             170             175

Cys Asp Val His Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr Tyr Met
      180             185             190

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Val Gly Leu Ile Val Val Ala Asn Ser Gly Met Ile Ser Leu Ala Ser
195 200 205

Phe Phe Ile Leu Ile Ile Ser Tyr Val Ile Ile Leu Leu Asn Leu Arg
210 215 220

Ser Gln Ser Ser Glu Asp Arg Arg Lys Ala Val Ser Thr Cys Gly Ser
225 230 235 240

His Val Ile Thr Val Leu Leu Val Leu Met Pro Pro Met Phe Met Tyr
245 250 255

Ile Arg Pro Ser Thr Thr Leu Ala Ala Asp Lys Leu Ile Ile Leu Phe
260 265 270

Asn Ile Val Met Pro Pro Leu Leu Asn Pro Leu Ile Tyr Thr Leu Arg
275 280 285

Asn Asn Asp Val Lys Asn Ala Met Arg Lys Leu Phe Arg Val Lys Arg
290 295 300

Ser Leu Gly Glu Lys
305

<210> 158
<211> 930
<212> DNA
<213> Homo sapiens

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agggtcaaga ggagcttagg ggagaagtga 930

<210> 159
<211> 329
<212> PRT
<213> Homo sapiens

<400> 159
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Asn Ile Thr Glu Phe Phe Met Leu Gly Leu Ser Gln Asn Ser Glu Val
 35 40 45
 Gln Arg Val Leu Phe Val Val Phe Leu Leu Ile Tyr Val Val Thr Val
 50 55 60
 Cys Gly Asn Met Leu Ile Val Val Thr Ile Thr Ser Ser Pro Thr Leu
 65 70 75 80
 Ala Ser Pro Val Tyr Phe Phe Leu Ala Asn Leu Ser Phe Ile Asp Thr
 85 90 95
 Phe Tyr Ser Ser Ser Met Ala Pro Lys Leu Ile Ala Asp Ser Leu Tyr
 100 105 110
 Glu Gly Arg Thr Ile Ser Tyr Glu Cys Cys Met Ala Gln Leu Phe Gly
 115 120 125
 Ala His Phe Leu Gly Gly Val Glu Ile Ile Leu Leu Thr Val Met Ala
 130 135 140
 Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Asn Thr Thr Ile
 145 150 155 160
 Met Thr Arg His Leu Cys Ala Met Leu Val Gly Val Ala Trp Leu Gly
 165 170 175
 Gly Phe Leu His Ser Leu Val Gln Leu Leu Leu Val Leu Trp Leu Pro
 180 185 190
 Phe Cys Gly Pro Asn Val Ile Asn His Phe Ala Cys Asp Leu Tyr Pro
 195 200 205
 Leu Leu Glu Val Ala Cys Thr Asn Thr Tyr Val Ile Gly Leu Leu Val
 210 215 220
 Val Ala Asn Ser Gly Leu Ile Cys Leu Leu Asn Phe Leu Met Leu Ala
 225 230 235 240
 Ala Ser Tyr Ile Val Ile Leu Tyr Ser Leu Arg Ser His Ser Ala Asp
 245 250 255
 Gly Arg Cys Lys Ala Leu Ser Thr Cys Gly Ala His Phe Ile Val Val
 260 265 270
 Ala Leu Phe Phe Val Pro Cys Ile Phe Thr Tyr Val His Pro Phe Ser
 275 280 285
 Thr Leu Pro Ile Asp Lys Asn Met Ala Leu Phe Tyr Gly Ile Leu Thr
 290 295 300
 Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn Glu Glu Val Lys
 305 310 315 320
 Asn Ala Met Arg Lys Leu Phe Thr Trp
 325

<210> 160

<211> 990

<212> DNA
<213> Homo sapiens

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gggctctcac agaactcaga ggtacagaga gttctctttg tggctctttt gctgatctat 180
gtggtcacgg tttgtggcaa catgctcatt gtggtcacta tcacctccag cccacgctg 240
gcttcccctg tgtatttttt cctggccaac ctatccttta ttgacacctt ttattcttct 300
tctatggctc ctaaactcat tgctgactca ttgtatgagg ggagaacccat ctcttatgag 360
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acagtgatgg cttatgaccg ctatgtggcc atctgtaagc ccctgcacaa tactaccatc 480
atgaccaggc atctctgtgc catgcttgta ggggtggctt ggcttggggg cttcctgcat 540
tcattgggtc agctcctcct ggtccttttg ttgcccttct gtgggcccac tgtgatcaat 600
cactttgcct gtgacttgta ccctttgctg gaagttgcct gcaccaatac gtatgtcatt 660
ggtctgctgg tggttgccaa cagtggttta atctgcctgt tgaacttcct catgctggct 720
gcctcctaca ttgtcctcct gtactccttg aggtcccaca gtgcagatgg gagatgcaaa 780
gccctctcca cctgtggagc ccacttcatt gttgttgctt tgttctttgt gccctgtata 840
tttacttatg tgcattcatt ttctacttta cctatagaca aaaatatggc attattttat 900
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aatgccatga gaaagctcct tacatggtaa 990

<210> 161
<211> 359
<212> PRT
<213> Homo sapiens

<400> 161
Met Asn Asn Ile Ala Gln Leu Ser Leu Gly Phe Ile Asp Leu Gly Ile
1 5 10 15
Pro Ser Val Leu Gln Lys Ile Ile Leu Thr Lys Ile Ile Leu Leu Phe
20 25 30
Lys Met Tyr Val Ser Asn Cys Asn Pro Cys Ala Ile His Arg Lys Ile
35 40 45
Asn Tyr Pro Asn Thr Lys Leu Asp Phe Glu Gln Val Asn Asn Ile Thr
50 55 60
Glu Phe Ile Leu Leu Gly Leu Thr Gln Asn Ala Glu Ala Gln Lys Leu
65 70 75 80
Leu Phe Ala Val Phe Thr Leu Ile Tyr Phe Leu Thr Met Val Asp Asn
85 90 95
Leu Ile Ile Val Val Thr Ile Thr Thr Ser Pro Ala Leu Asp Ser Pro
100 105 110
Val Tyr Phe Phe Leu Ser Phe Phe Ser Phe Ile Asp Gly Cys Ser Ser
115 120 125
Ser Thr Met Ala Pro Lys Met Ile Phe Asp Leu Leu Thr Glu Lys Lys
130 135 140
Thr Ile Ser Phe Ser Gly Cys Met Thr Gln Leu Phe Val Glu His Phe
145 150 155 160
Phe Gly Gly Val Glu Ile Ile Leu Leu Val Val Met Ala Tyr Asp Cys
165 170 175

Tyr Val Ala Ile Cys Lys Pro Leu Tyr Tyr Leu Ile Thr Met Asn Arg
 180 185 190
 Gln Val Cys Gly Leu Leu Val Ala Met Ala Trp Val Gly Gly Phe Leu
 195 200 205
 His Ala Leu Ile Gln Met Leu Leu Ile Val Trp Leu Pro Phe Cys Gly
 210 215 220
 Pro Asn Val Ile Asp His Phe Ile Cys Asp Leu Phe Pro Leu Leu Lys
 225 230 235 240
 Leu Ser Cys Thr Asp Thr His Val Phe Gly Leu Phe Val Ala Ala Asn
 245 250 255
 Ser Gly Leu Met Cys Met Leu Ile Phe Ser Ile Leu Ile Thr Ser Tyr
 260 265 270
 Val Leu Ile Leu Cys Ser Gln Arg Lys Ala Leu Ser Thr Cys Ala Phe
 275 280 285
 His Ile Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Leu Val Tyr
 290 295 300
 Leu Arg Pro Met Ile Thr Phe Pro Ile Asp Lys Ala Val Ser Val Phe
 305 310 315 320
 Tyr Thr Val Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
 325 330 335
 Asn Thr Glu Val Lys Asn Ala Met Lys Gln Leu Trp Ser Gln Ile Ile
 340 345 350
 Trp Gly Asn Asn Leu Cys Asp
 355

<210> 162
 <211> 1080
 <212> DNA
 <213> Homo sapiens

<400> 162
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 ccttgtgcta ttcacagaaa aatcaattat ccaaatacca aactggattt cgagcaagtg 180
 aacaacataa cggaattcat cttgcttggc ctgacacaga acgcagaggc acagaaactc 240
 ttgtttgctg tgtttacact catctacttt ctcaccatgg tagacaacct aatcattgtg 300
 gtgacaatca ccaccagccc agccctggac tcccccggtg atttttttct gtctttcttt 360
 tccttcatag atggctgctc ctcttctacc atggccccca aaatgatatt tgacttactc 420
 actgaaaaga aaactatttc cttcagtggg tgcattgaccc agctctttgt agaacatttc 480
 tttgggggag ttgagatcat tctgctcgtg gtgatggcct atgactgcta tgtggccatc 540
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 cccttctgtg gccccaatgt cattgaccat ttcattctgt accctttccc tctgctaaaa 720
 ctctcctgca ctgacactca cgtcttttga ctctttgttg ccgccaacag tgggctgatg 780
 tgtatgtcta ttttttctat tcttattacc tcttacgtcc taatcctctg ctcacagcgg 840
 aaggctctct ctacctgcgc ctccatatac actgtagtcg tcctattctt tgttccctgt 900
 atattggtgt accttcgacc catgatcacc ttccctattg ataaagctgt gtctgtgttt 960
 tatactgtgg taacacccat gttaaaccct ttaatctaca ccctcagaaa cacagaggtg 1020

aaaaatgccca tgaagcagct ctggagccaa ataatctggg gtaacaattt gtgtgattag 1080

<210> 163

<211> 323

<212> PRT

<213> Homo sapiens

<400> 163

Met Trp Gln Lys Asn Gln Thr Ser Leu Ala Asp Phe Ile Leu Glu Gly
1 5 10 15

Leu Phe Asp Asp Ser Leu Thr His Leu Phe Leu Phe Ser Leu Thr Met
20 25 30

Val Val Phe Leu Ile Ala Val Ser Gly Asn Thr Leu Thr Ile Leu Leu
35 40 45

Ile Cys Ile Asp Pro Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60

Gln Leu Ser Leu Met Asp Leu Met His Val Ser Thr Ile Ile Leu Lys
65 70 75 80

Met Ala Thr Asn Tyr Leu Ser Gly Lys Lys Ser Ile Ser Phe Val Gly
85 90 95

Cys Ala Thr Gln His Phe Leu Tyr Leu Cys Leu Gly Gly Ala Glu Cys
100 105 110

Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Arg Tyr Ala Val Leu Met Asn Lys Lys Val Gly Leu Met Met
130 135 140

Ala Val Met Ser Trp Leu Gly Ala Ser Val Asn Ser Leu Ile His Met
145 150 155 160

Ala Ile Leu Met His Phe Pro Phe Cys Gly Pro Arg Lys Val Tyr His
165 170 175

Phe Tyr Cys Glu Phe Pro Ala Val Val Lys Leu Val Cys Gly Asp Ile
180 185 190

Thr Val Tyr Glu Thr Thr Val Tyr Ile Ser Ser Ile Leu Leu Leu Leu
195 200 205

Pro Ile Phe Leu Ile Ser Thr Ser Tyr Val Phe Ile Leu Gln Ser Val
210 215 220

Ile Gln Met Arg Ser Ser Gly Ser Lys Arg Asn Ala Phe Ala Thr Cys
225 230 235 240

Gly Ser His Leu Thr Val Val Ser Leu Trp Phe Gly Ala Cys Ile Phe
245 250 255

Ser Tyr Met Arg Pro Arg Ser Gln Cys Thr Leu Leu Gln Asn Lys Val
260 265 270

Gly Ser Val Phe Tyr Ser Ile Ile Thr Pro Thr Leu Asn Ser Leu Ile

275

280

285

Tyr Thr Leu Arg Asn Lys Asp Val Ala Lys Ala Leu Arg Arg Val Leu
 290 295 300

Arg Arg Asp Val Ile Thr Gln Cys Ile Gln Arg Leu Gln Leu Trp Leu
 305 310 315 320

Pro Arg Val

<210> 164

<211> 972

<212> DNA

<213> Homo sapiens

<400> 164

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 ggcaacacccc tcaccattct cctcatctgc attgatcccc agcttcatac accaatgtat 180
 ttcttgctca gccagctctc cctcatggat ctgatgcatg tctccacaat catcctgaag 240
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 cacttcctct atttgtgtct aggtgggtgct gaatgttttc tcttagctgt catgtcctat 360
 gaccgctatg ttgccatctg tcatccactg cgctatgctg tgctcatgaa caagaagggtg 420
 ggactgatga tggctgtcat gtcatgggtg ggggcatccg tgaactccct aattcacatg 480
 gcgatcttga tgcacttccc tttctgtggg cctcggaag tctaccactt ctactgtgag 540
 ttcccagctg ttgtgaagtt ggtatgtggc gacatcactg tgtatgagac cacagtgtac 600
 atcagcagca ttctcctcct cctccccatc ttcttgattt ctacatccta tgtcttcac 660
 cttcaaagtg tcattcagat gcgctcatct gggagcaaga gaaatgcctt tgccacttgt 720
 ggctcccacc tcacgggtgt ttctctttgg ttgtgtgctt gcactcttct ctacatgaga 780
 cccaggtccc agtgcactct attgcagaac aaagtgggtt ctgtgttcta cagcatcatt 840
 acgcccacat tgaattctct gatttatact ctccggaata aagatgtagc taaggctctg 900
 agaagagtgc tgaggagaga tgttatcacc cagtgcattc aacgactgca attgtgggtg 960
 ccccgagtgt ag 972

<210> 165

<211> 348

<212> PRT

<213> Homo sapiens

<400> 165

Met Leu Asp Pro Ser Ile Ser Ser His Thr Leu Tyr Leu His Ser Leu
 1 5 10 15

Phe Pro Gln Gly Leu Arg Lys Gly Thr Met Trp Gln Lys Asn Gln Thr
 20 25 30

Ser Leu Ala Asp Phe Ile Leu Glu Gly Leu Phe Asp Asp Ser Leu Thr
 35 40 45

His Leu Phe Leu Phe Ser Leu Thr Met Val Val Phe Leu Ile Ala Val
 50 55 60

Ser Gly Asn Thr Leu Thr Ile Leu Leu Ile Cys Ile Asp Pro Gln Leu
 65 70 75 80

His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser Leu Met Asp Leu
 85 90 95

Met His Val Ser Thr Thr Ile Leu Lys Met Ala Thr Asn Tyr Leu Ser
 100 105 110
 Gly Lys Lys Ser Ile Ser Phe Val Gly Cys Ala Thr Gln His Phe Leu
 115 120 125
 Tyr Leu Cys Leu Gly Gly Ala Glu Cys Phe Leu Leu Ala Val Met Ser
 130 135 140
 Tyr Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg Tyr Ala Val Leu
 145 150 155 160
 Met Asn Lys Lys Val Gly Leu Met Met Ala Val Met Ser Trp Leu Gly
 165 170 175
 Ala Ser Val Asn Ser Leu Ile His Met Ala Ile Leu Met His Phe Pro
 180 185 190
 Phe Cys Gly Pro Arg Lys Val Tyr His Phe Tyr Cys Glu Phe Pro Ala
 195 200 205
 Val Val Lys Leu Val Cys Gly Asp Ile Thr Val Tyr Glu Thr Thr Val
 210 215 220
 Tyr Ile Ser Ser Ile Leu Leu Leu Leu Pro Ile Phe Leu Ile Ser Thr
 225 230 235 240
 Ser Tyr Val Phe Ile Leu Gln Ser Val Ile Gln Met Arg Ser Ser Gly
 245 250 255
 Ser Lys Arg Asn Ala Phe Ala Thr Cys Gly Ser His Leu Thr Val Val
 260 265 270
 Ser Leu Trp Phe Gly Ala Cys Ile Phe Ser Tyr Met Arg Pro Arg Ser
 275 280 285
 Gln Cys Thr Leu Leu Gln Asn Lys Val Gly Ser Val Phe Tyr Ser Ile
 290 295 300
 Ile Thr Pro Thr Leu Asn Ser Leu Ile Tyr Thr Leu Arg Asn Lys Asp
 305 310 315 320
 Val Ala Lys Ala Leu Arg Arg Val Leu Arg Arg Asp Val Ile Thr Gln
 325 330 335
 Cys Ile Gln Arg Leu Gln Leu Trp Leu Pro Arg Val
 340 345

<210> 166
 <211> 1047
 <212> DNA
 <213> Homo sapiens

<400> 166
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 ttgagaaagg ggacaatgtg gcagaagaat cagacctctc tggcagactt catccttgag 120
 gggctcttcg atgactccct taccacacct ttccctttct ccttgaccat ggtgggtctc 180
 cttattgcgg tgagtggcaa caccctcacc attctcctca tctgcattga tccccagctt 240
 catacaccaa tgtatttcct gctcagccag ctctccctca tggatctgat gcatgtctcc 300
 acaaccatcc tgaagatggc taccaactac ctatctggca agaaatctat ctcctttgtg 360

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ggctgtgcaa cccagcactt cctctatttg tgtctaggtg gtgctgaatg ttttctctta 420
gctgtcatgt cctatgaccg ctatgttgcc atctgtcatc cactgcgcta tgctgtgctc 480
atgaacaaga aggtgggact gatgatggct gtcatgtcat gggtgggggc atccgtgaac 540
tccctaattc acatggcgat cttgatgcac ttccctttct gtgggcctcg gaaagtctac 600
cacttctact gtgagttccc agctgttggt aagttgggtat gtggcgacat cactgtgtat 660
gagaccacag tgtacatcag cagcattctc ctccctctcc ccattcttct gatttctaca 720
tcctatgtct tcaccttcca aagtgtcatt cagatgcgct catctgggag caagagaaat 780
gcctttgcca cttgtggctc ccacctcacg gtggtttctc tttggtttgg tgccctgcac 840
ttctcctaca tgagaccag gtcccagtgc actctattgc agaacaaagt tggttctgtg 900
ttctacagca tcattacgcc cacattgaat tctctgattt atactctccg gaataaagat 960
gtagctaagg ctctgagaag agtgctgagg agagatgtta tcacccagtg cattcaacga 1020
ctgcaattgt ggttgccccg agtgtag 1047

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<210> 167
 <211> 370
 <212> PRT
 <213> Homo sapiens

<400> 167

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Met Phe Ser Met Thr Thr Glu Ala Leu Asn Asn Phe Ala Leu Gly Cys
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Thr Asn Leu Leu Met Thr Met Ile Pro Gln Ile Asp Leu Lys Gln Ile
      20              25              30

Phe Leu Cys Pro Asn Cys Arg Leu Tyr Met Ile Pro Val Gly Ala Phe
      35              40              45

Ile Phe Ser Leu Gly Asn Met Gln Asn Gln Ser Phe Val Thr Glu Phe
      50              55              60

Val Leu Leu Gly Leu Ser Gln Asn Pro Asn Val Gln Glu Ile Val Phe
      65              70              75              80

Val Val Phe Leu Phe Val Tyr Ile Ala Thr Val Gly Gly Asn Met Leu
      85              90              95

Ile Val Val Thr Ile Leu Ser Ser Pro Ala Leu Leu Val Ser Pro Met
      100             105             110

Tyr Phe Phe Leu Gly Phe Leu Ser Phe Leu Asp Ala Cys Phe Ser Ser
      115             120             125

Val Ile Thr Pro Lys Met Ile Val Asp Ser Leu Tyr Val Thr Lys Thr
      130             135             140

Ile Ser Phe Glu Gly Cys Met Met Gln Leu Phe Ala Glu His Phe Phe
      145             150             155             160

Ala Gly Val Glu Val Ile Val Leu Thr Ala Met Ala Tyr Asp Arg Tyr
      165             170             175

Val Ala Ile Cys Lys Pro Leu His Tyr Ser Ser Ile Met Asn Arg Arg
      180             185             190

Leu Cys Gly Ile Leu Met Gly Val Ala Trp Thr Gly Gly Leu Leu His
      195             200             205

Ser Met Ile Gln Ile Leu Phe Thr Phe Gln Leu Pro Phe Cys Gly Pro
      210             215             220

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Asn Val Ile Asn His Phe Met Cys Asp Leu Tyr Pro Leu Leu Glu Leu
 225 230 235 240
 Ala Cys Thr Asp Thr His Ile Phe Gly Leu Met Val Val Ile Asn Ser
 245 250 255
 Gly Phe Ile Cys Ile Ile Asn Phe Ser Leu Leu Leu Val Ser Tyr Ala
 260 265 270
 Val Ile Leu Leu Ser Leu Arg Thr His Ser Ser Glu Gly Arg Trp Lys
 275 280 285
 Ala Leu Ser Thr Cys Gly Ser His Ile Ala Val Val Ile Leu Phe Phe
 290 295 300
 Val Pro Cys Ile Phe Val Tyr Thr Arg Pro Pro Ser Ala Phe Ser Leu
 305 310 315 320
 Asp Lys Met Ala Ala Ile Phe Tyr Ile Ile Leu Asn Pro Leu Leu Asn
 325 330 335
 Pro Leu Ile Tyr Thr Phe Arg Asn Lys Glu Val Lys Gln Ala Met Arg
 340 345 350
 Arg Ile Trp Asn Arg Leu Met Val Val Ser Asp Glu Lys Glu Asn Ile
 355 360 365
 Lys Leu
 370

<210> 168
 <211> 1113
 <212> DNA
 <213> Homo sapiens

<400> 168
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 atgactatga taccacaaat tgatctgaag caaattttcc tttgtcctaa ttgcagacta 120
 tacatgatcc ctgttgagc tttcatcttt tccttgggaa acatgcaaaa ccaaagcttt 180
 gtaactgagt ttgtcctcct gggactttca cagaatccaa atgttcagga aatagtattt 240
 gttgtatttt tgtttgtcta cattgcaact gttgggggca acatgctaata ttagtaacc 300
 attctcagca gccctgctct tctgggtgtct cctatgtact tcttcttggg ctctctgtcc 360
 ttcttgatg cgtgcttctc atctgtcatc accccaaaga tgattgtaga ctccctctat 420
 gtgacaaaaa ccatctcttt tgaaggctgc atgatgcagc tctttgctga acacttcttt 480
 gctggggtgg aggtgattgt cctcacagcc atggcctatg atcgttatgt ggccatttgc 540
 aagcccttgc attactcttc tatcatgaac aggaggtctt gtggcattct gatgggggta 600
 gcctggacag ggggcctctt gcattccatg atacaaattc tttttacttt ccagcttccc 660
 ttttgtggcc ccaatgtcat caatcacttt atgtgtgact tgtaccggtt actggagctt 720
 gcctgcactg atactcacat ctttggtctc atgtgtgtca tcaacagtgg gtttatctgc 780
 atcataaact tctccttggt gcttgtctcc tatgtgtca tcttgtcttc tctgagaaca 840
 cacagtcttg aaggcgctg gaaagctctc tccacctgtg gatctcacat tgctgttgtg 900
 attttgttct ttgtcccatg catatttgta tatacacgac ctccatctgc ttttccctt 960
 gacaaaatgg cggcaatatt ttatatcatc ttaaattccct tgctcaatcc tttgatttac 1020
 actttcagga ataaggaagt aaaacaggcc atgaggagaa tatggaacag actgatggtg 1080
 gtttctgatg agaaagaaaa tattaactt taa 1113

<210> 169
 <211> 313

<212> PRT

<213> Homo sapiens

<400> 169

Met Gly Asn Trp Ser Thr Val Thr Glu Ile Thr Leu Ile Ala Phe Pro
1 5 10 15

Ala Leu Leu Glu Ile Arg Ile Ser Leu Phe Val Val Leu Val Val Thr
20 25 30

Tyr Thr Leu Thr Ala Thr Gly Asn Ile Thr Ile Ile Ser Leu Ile Trp
35 40 45

Ile Asp His Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Phe Leu Asp Ile Leu Tyr Thr Thr Val Ile Thr Pro Lys Leu Leu
65 70 75 80

Ala Cys Leu Leu Gly Glu Glu Lys Thr Ile Ser Phe Ala Gly Cys Met
85 90 95

Ile Gln Thr Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Ile Leu
100 105 110

Leu Ala Val Met Ser Phe Asp Arg Tyr Met Ala Ile Cys Asp Pro Leu
115 120 125

His Tyr Thr Val Ile Met Asn Ser Arg Ala Cys Leu Leu Leu Val Leu
130 135 140

Gly Cys Trp Val Gly Ala Phe Leu Ser Val Leu Phe Pro Thr Ile Val
145 150 155 160

Val Thr Arg Leu Pro Tyr Cys Arg Lys Glu Ile Asn His Phe Phe Cys .
165 170 175

Asp Ile Ala Pro Leu Leu Gln Val Ala Cys Ile Asn Thr His Leu Ile
180 185 190

Glu Lys Ile Asn Phe Leu Leu Ser Ala Leu Val Ile Leu Ser Ser Leu
195 200 205

Ala Phe Thr Thr Gly Ser Tyr Val Tyr Ile Ile Ser Thr Ile Leu Arg
210 215 220

Ile Pro Ser Thr Gln Gly Arg Gln Lys Ala Phe Ser Thr Cys Ala Ser
225 230 235 240

His Ile Thr Val Val Ser Ile Ala His Gly Ser Asn Ile Phe Val Tyr
245 250 255

Val Arg Pro Asn Gln Asn Ser Ser Leu Asp Tyr Asp Lys Val Ala Ala
260 265 270

Val Leu Ile Thr Val Val Thr Pro Leu Leu Asn Pro Phe Ile Tyr Ser
275 280 285

Leu Arg Asn Glu Lys Val Gln Glu Val Leu Arg Glu Thr Val Asn Arg
290 295 300

Ile Met Thr Leu Ile Gln Arg Lys Thr
305 310

<210> 170
<211> 942
<212> DNA
<213> Homo sapiens

<400> 170
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attcgaatat ctctcttcgt gggtcttctgt gtaacttaca cattaacagc aacaggaaac 120
atcaccatca tctccctgat atggattgat catcgctgc aaactccaat gtacttcttc 180
ctcagtaatt tgtcctttct ggatacttta tacaccactg tcattacccc aaagttgttg 240
gcctgcctcc taggagaaga gaaaaccata tcttttgctg gttgcatgat ccaaacatat 300
ttctacttct ttctggggac ggtggagttt atcctcttgg cggtgatgtc ctttgaccgc 360
tacatggcta tctgcgaccc actgcactac acgggtcatca tgaacagcag ggcctgcctt 420
ctgctggttc tgggatgctg ggtgggagcc ttctgtctg tgttgtttcc aaccattgta 480
gtgacaaggc taccttactg taggaaagaa attaatacatt tcttctgtga cattgcccct 540
cttcttcagg tggcctgtat aaatactcac ctcatgaga agataaaactt tctcctctct 600
gcccttgtea tctgagctc cctggcattc actactgggt cctacgtgta cataatttct 660
accatcctgc gtatcccctc caccagggc cgtcagaaag ctttttctac ctgtgcttct 720
cacatcactg ttgtctccat tgcccacggg agcaacatct ttgtgtatgt gagaccat 780
cagaactcct cactggatta tgacaagggt gccgctgtcc tcatcacagt ggtgaccct 840
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acagtgaaca gaatcatgac cttgatacaa aggaaaactt ga 942

<210> 171
<211> 312
<212> PRT
<213> Homo sapiens

<400> 171
Met Arg Asn Gly Thr Val Ile Thr Glu Phe Ile Leu Leu Gly Phe Pro
1 5 10 15
Val Ile Gln Gly Leu Gln Thr Pro Leu Phe Ile Ala Ile Phe Leu Thr
20 25 30
Tyr Ile Leu Thr Leu Ala Gly Asn Gly Leu Ile Ile Ala Thr Val Trp
35 40 45
Ala Glu Pro Arg Leu Gln Ile Pro Met Tyr Phe Phe Leu Cys Asn Leu
50 55 60
Ser Phe Leu Glu Ile Trp Tyr Thr Thr Thr Val Ile Pro Lys Leu Leu
65 70 75 80
Gly Thr Phe Val Val Ala Arg Thr Val Ile Cys Met Ser Cys Cys Leu
85 90 95
Leu Gln Ala Phe Phe His Phe Phe Val Gly Thr Thr Glu Phe Leu Ile
100 105 110
Leu Thr Ile Met Ser Phe Asp Arg Tyr Leu Thr Ile Cys Asn Pro Leu
115 120 125
His His Pro Thr Ile Met Thr Ser Lys Leu Cys Leu Gln Leu Ala Leu
130 135 140

Ser Ser Trp Val Val Gly Phe Thr Ile Val Phe Cys Gln Thr Met Leu
 145 150 155 160
 Leu Ile Gln Leu Pro Phe Cys Gly Asn Asn Val Ile Ser His Phe Tyr
 165 170 175
 Cys Asp Val Gly Pro Ser Leu Lys Ala Ala Cys Ile Asp Thr Ser Ile
 180 185 190
 Leu Glu Leu Leu Gly Val Ile Ala Thr Ile Leu Val Ile Pro Gly Ser
 195 200 205
 Leu Leu Phe Asn Met Ile Ser Tyr Ile Tyr Ile Leu Ser Ala Ile Leu
 210 215 220
 Arg Ile Pro Ser Ala Thr Gly His Gln Lys Thr Phe Ser Thr Cys Ala
 225 230 235 240
 Ser His Leu Thr Val Val Ser Leu Leu Tyr Gly Ala Val Leu Phe Met
 245 250 255
 Tyr Leu Arg Pro Thr Ala His Ser Ser Phe Lys Ile Asn Lys Val Val
 260 265 270
 Ser Val Leu Asn Thr Ile Leu Thr Pro Leu Leu Asn Pro Phe Ile Tyr
 275 280 285
 Thr Ile Arg Asn Lys Glu Val Lys Gly Ala Leu Arg Lys Ala Met Thr
 290 295 300
 Cys Pro Lys Thr Gly His Ala Lys
 305 310

<210> 172
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 172
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 gggcttatta ttgccactgt gtgggctgag cccaggctac aaattccaat gtacttcttc 180
 ctttgtaact tgtctttctt agaaatctgg tacaccacca cagtcatccc caaactgcta 240
 ggaacctttg tagtggcaag aacagtaatc tgcattgctt gctgcctgct gcaggccttc 300
 ttccacttct tcgtgggcac caccgagttc ttgatcctca ctatcatgtc ttttgaccgc 360
 tacctcacca tctgcaatcc ccttcaccac cccaccatca tgaccagcaa actctgcctg 420
 cagctggccc tgagctcctg ggtgggtggc ttaccattg tcttttgtca gacgatgctg 480
 ctcatccagt tgccattctg tggcaataat gttatcagtc atttctactg tgatgttggg 540
 ccagtttga aagccgctg catagacacc agcattttgg aactcctggg cgtcatagca 600
 accatccttg tgatcccagg gtcacttctc tttaatatga tttcttatat ctacattctg 660
 tccgcaatcc tacgaattcc ttcagccact ggccacaaaa agactttctc tacctgtgcc 720
 tcgcacctga cagttgtctc cctgctctac ggggctgttc tgttcatgta cctaagaccc 780
 acagcacact cctcctttta gattaataag gtgggtgtctg tgctaaatac tatcctcacc 840
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 aaggcaatga cttgcccaaa gactggtcat gcaaagtaa 939

<210> 173
 <211> 314
 <212> PRT

<213> Homo sapiens

<400> 173

Met	Leu	Met	Asn	Tyr	Ser	Ser	Ala	Thr	Glu	Phe	Tyr	Leu	Leu	Gly	Phe	
1				5					10					15		
Pro	Gly	Ser	Glu	Glu	Leu	His	His	Ile	Leu	Phe	Ala	Ile	Phe	Phe	Phe	
			20					25					30			
Phe	Tyr	Leu	Val	Thr	Leu	Met	Gly	Asn	Thr	Val	Ile	Ile	Met	Ile	Val	
		35					40					45				
Cys	Val	Asp	Lys	Arg	Leu	Gln	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Gly	His	
	50					55					60					
Leu	Ser	Ala	Leu	Glu	Ile	Leu	Val	Thr	Thr	Ile	Ile	Val	Pro	Val	Met	
65					70					75					80	
Leu	Trp	Gly	Leu	Leu	Leu	Pro	Gly	Met	Gln	Thr	Ile	Tyr	Leu	Ser	Ala	
			85						90					95		
Cys	Val	Val	Gln	Leu	Phe	Leu	Tyr	Leu	Ala	Val	Gly	Thr	Thr	Glu	Phe	
			100					105					110			
Ala	Leu	Leu	Gly	Ala	Met	Ala	Val	Asp	Arg	Tyr	Val	Ala	Val	Cys	Asn	
		115					120					125				
Pro	Leu	Arg	Tyr	Asn	Ile	Ile	Met	Asn	Arg	His	Thr	Cys	Asn	Phe	Val	
	130					135					140					
Val	Leu	Val	Ser	Trp	Val	Phe	Gly	Phe	Leu	Phe	Gln	Ile	Trp	Pro	Val	
145					150					155					160	
Tyr	Val	Met	Phe	Gln	Leu	Thr	Tyr	Cys	Lys	Ser	Asn	Val	Val	Asn	Asn	
				165					170					175		
Phe	Phe	Cys	Asp	Arg	Gly	Gln	Leu	Leu	Lys	Leu	Ser	Cys	Asn	Asn	Thr	
			180					185					190			
Leu	Phe	Thr	Glu	Phe	Ile	Leu	Phe	Leu	Met	Ala	Val	Phe	Val	Leu	Phe	
		195						200				205				
Gly	Ser	Leu	Ile	Pro	Thr	Ile	Val	Ser	Asn	Ala	Tyr	Ile	Ile	Ser	Thr	
	210					215					220					
Ile	Leu	Lys	Ile	Pro	Ser	Ser	Ser	Gly	Arg	Arg	Lys	Ser	Phe	Ser	Thr	
225					230					235					240	
Cys	Ala	Ser	His	Phe	Thr	Cys	Val	Val	Ile	Gly	Tyr	Gly	Ser	Cys	Leu	
				245					250					255		
Phe	Leu	Tyr	Val	Lys	Pro	Lys	Gln	Thr	Gln	Ala	Ala	Asp	Tyr	Asn	Trp	
			260					265					270			
Val	Val	Ser	Leu	Met	Val	Ser	Val	Val	Thr	Pro	Phe	Leu	Asn	Pro	Phe	
		275						280				285				
Ile	Phe	Thr	Leu	Arg	Asn	Asp	Lys	Val	Ile	Glu	Ala	Leu	Arg	Asp	Gly	
	290					295					300					
Val	Lys	Arg	Cys	Cys	Gln	Leu	Phe	Arg	Asn							

305

310

<210> 174
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 174
 atgttgatga attactctag tgccactgaa ttttatctcc ttggcttccc tggctctgaa 60
 gaactacatc atatcctttt tgctatattc ttctttttct acttggtgac attaatggga 120
 aacacagtca tcatcatgat tgtctgtgtg gataaacgtc tgcagtcctc catgtatttc 180
 ttctctggcc acctctctgc cctggagatc ctggtcacaa ccataatcgt ccccgatgat 240
 ctttggggat tgctgctccc tgggatgcag acaatatatt tgtctgcctg tgttgtccag 300
 ctcttcttgt accttgctgt ggggacaaca gagttcgcat tacttggagc aatggctgtg 360
 gaccgttatg tggctgtctg taaccctctg aggtacaaca tcattatgaa cagacacacc 420
 tgcaactttg tggttcttgt gtcattgggtg tttgggtttc tttttcaaact ctggccgggtc 480
 tatgtcatgt ttcagcttac ttactgcaaa tcaaatgtgg tgaacaattt tttttgtgac 540
 cgaggggcaat tgctcaaact atcctgcaat aatactcttt tcacggagtt tatcctcttc 600
 ttaatggctg tttttgttct ctttgggttct ttgatcccta caattgtctc caacgcctac 660
 atcatctcca ccattctcaa gatcccgctc tctctgggcc ggaggaaatc cttctccact 720
 tgtgcctccc acttcacctg tgttgtgatt ggctacggca gctgcttgtt tctctacgtg 780
 aaacccaagc aaacgcaggc agctgattac aattgggtag tttccctgat ggtttcagta 840
 gtaactcctt tcctcaatcc ttcatcttc accctccgga atgataaagt catagaggcc 900
 cttcgggatg gggtgaaacg ctgctgtcaa ctattcagga attag 945

<210> 175
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 175
 Met Glu Thr Trp Val Asn Gln Ser Tyr Thr Asp Gly Phe Phe Leu Leu
 1 5 10 15
 Gly Ile Phe Ser His Ser Thr Ala Asp Leu Val Leu Phe Ser Val Val
 20 25 30
 Met Ala Val Phe Thr Val Ala Leu Cys Gly Asn Val Leu Leu Ile Phe
 35 40 45
 Leu Ile Tyr Met Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 Ser Gln Leu Ser Leu Met Asp Leu Met Leu Val Cys Thr Asn Val Pro
 65 70 75 80
 Lys Met Ala Ala Asn Phe Leu Ser Gly Arg Lys Ser Ile Ser Phe Val
 85 90 95
 Gly Cys Gly Ile Gln Ile Gly Leu Phe Val Cys Leu Val Gly Ser Glu
 100 105 110
 Gly Leu Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Ser
 115 120 125
 His Pro Leu His Tyr Pro Ile Leu Met Asn Gln Arg Val Cys Leu Gln
 130 135 140
 Ile Thr Gly Ser Ser Trp Ala Phe Gly Ile Ile Asp Gly Leu Ile Gln

145		150		155		160
Met Val Val Val	Met Asn Phe Pro Tyr Cys Gly Leu Arg Lys Val Asn					
	165		170		175	
His Phe Phe Cys Glu Met Leu Ser Leu Leu Lys Leu Ala Cys Val Asp						
	180		185		190	
Thr Ser Leu Phe Glu Lys Val Ile Phe Ala Cys Cys Val Phe Met Leu						
	195		200		205	
Leu Phe Pro Phe Ser Ile Ile Val Ala Ser Tyr Ala His Ile Leu Gly						
	210		215		220	
Thr Val Leu Gln Met His Ser Ala Gln Ala Trp Lys Lys Ala Leu Ala						
	225		230		235	240
Thr Cys Ser Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ala Ala						
	245		250		255	
Met Phe Ile Tyr Leu Arg Pro Arg His Tyr Arg Ala Pro Ser His Asp						
	260		265		270	
Lys Val Ala Ser Ile Phe Tyr Thr Val Leu Thr Pro Met Leu Asn Pro						
	275		280		285	
Leu Ile Tyr Ser Leu Arg Asn Arg Glu Val Met Gly Ala Leu Arg Lys						
	290		295		300	
Gly Leu Asp Arg Cys Arg Ile Gly Ser Gln His						
	305		310		315	

<210> 176
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 176
 atggagacgt ggggtgaacca gtcctacaca gatggcttct tcctcttagg catcttctcc 60
 cacagtactg ctgaccttgt cctcttctcc gtggttatgg cggctctcac agtggccctc 120
 tgtgggaatg tcctcctcat cttcctcatc tacatggacc ctacacctca ccccccatg 180
 tacttcttcc tcagccagct ctccctcatg gacctcatgt tggctctgtac caatgtgcc 240
 aagatggcag ccaacttctt gtctggcagg aagtccatct cctttgtggg ctgtggcata 300
 caaattggcc tctttgtctg tcttgtggga tctgaggggc tcttgtctgg actcatggct 360
 tatgaccgct atgtggccat tagccacca cttcactatc ccacccctcat gaatcagagg 420
 gtctgtctcc agattactgg gagctcctgg gcctttggga taatcgatgg cttgatccag 480
 atggtggtag taatgaattt cccctactgt ggcttgagga aggtgaacca tttcttctgt 540
 gagatgctat ccttggtgaa gctggcctgt gtagacacat ccctggttga gaaggtgata 600
 tttgcttgcg gtgtcttcat gcttctcttc ccattctcca tcacgtggc ctcctatgct 660
 cacattctag ggactgtgct gcaaattgcac tctgctcagg cctggaaaaa ggccctggcc 720
 acctgctcct cccacctgac agctgtcacc ctcttctatg gggcagccat gttcatctac 780
 ctgaggccta ggcactaccg ggccccagc catgacaagg tggcctctat cttctacacg 840
 gtccttactc ccatgctcaa cccctcatt tacagcttga ggaacaggga ggtgatgggg 900
 gcactgagga aggggctgga ccgctgcagg atcggcagcc agcactga 948

<210> 177
 <211> 335
 <212> PRT
 <213> Homo sapiens

<400> 177

Met	Leu	Gly	Ser	Lys	Pro	Arg	Val	His	Leu	Tyr	Ile	Leu	Pro	Cys	Ala	
1				5					10					15		
Ser	Gln	Gln	Val	Ser	Thr	Met	Gly	Asp	Arg	Gly	Thr	Ser	Asn	His	Ser	
			20					25					30			
Glu	Met	Thr	Asp	Phe	Ile	Leu	Ala	Gly	Phe	Arg	Val	Arg	Pro	Glu	Leu	
		35					40					45				
His	Ile	Leu	Leu	Phe	Leu	Leu	Phe	Leu	Phe	Val	Tyr	Ala	Met	Ile	Leu	
	50					55					60					
Leu	Gly	Asn	Val	Gly	Met	Met	Thr	Ile	Ile	Met	Thr	Asp	Pro	Arg	Leu	
65					70					75					80	
Asn	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Gly	Asn	Leu	Ser	Phe	Ile	Asp	Leu	
				85					90					95		
Phe	Tyr	Ser	Ser	Val	Ile	Glu	Pro	Lys	Ala	Met	Ile	Asn	Phe	Trp	Ser	
			100					105					110			
Glu	Asn	Lys	Ser	Ile	Ser	Phe	Ala	Gly	Cys	Val	Ala	Gln	Leu	Phe	Leu	
	115						120					125				
Phe	Ala	Leu	Leu	Ile	Val	Thr	Glu	Gly	Phe	Leu	Leu	Ala	Ala	Met	Ala	
	130					135						140				
Tyr	Asp	Arg	Phe	Ile	Ala	Ile	Cys	Asn	Pro	Leu	Leu	Tyr	Ser	Val	Gln	
145					150					155					160	
Met	Ser	Thr	Arg	Leu	Cys	Thr	Gln	Leu	Val	Ala	Gly	Ser	Tyr	Phe	Cys	
				165					170					175		
Gly	Cys	Ile	Ser	Ser	Val	Ile	Gln	Thr	Ser	Met	Thr	Phe	Thr	Leu	Ser	
			180					185					190			
Phe	Cys	Ala	Ser	Arg	Ala	Val	Asp	His	Phe	Tyr	Cys	Asp	Ser	Arg	Pro	
		195					200					205				
Leu	Gln	Arg	Leu	Ser	Cys	Ser	Asp	Leu	Phe	Ile	His	Arg	Met	Ile	Ser	
	210					215					220					
Phe	Ser	Leu	Ser	Cys	Ile	Ile	Ile	Leu	Pro	Thr	Ile	Ile	Val	Ile	Ile	
225					230					235					240	
Val	Ser	Tyr	Met	Tyr	Ile	Val	Ser	Thr	Val	Leu	Lys	Ile	His	Ser	Thr	
				245					250					255		
Glu	Gly	His	Lys	Lys	Ala	Phe	Ser	Thr	Cys	Ser	Ser	His	Leu	Gly	Val	
			260					265					270			
Val	Ser	Val	Leu	Tyr	Gly	Ala	Val	Phe	Phe	Met	Tyr	Leu	Thr	Pro	Asp	
		275					280					285				
Arg	Phe	Pro	Glu	Leu	Ser	Lys	Val	Ala	Ser	Leu	Cys	Tyr	Ser	Leu	Val	
	290					295					300					
Thr	Pro	Met	Leu	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	
305					310					315					320	

Gln Glu Ala Leu Lys Lys Phe Leu Glu Lys Lys Asn Ile Ile Leu
325 330 335

<210> 178
<211> 1008
<212> DNA
<213> Homo sapiens

<400> 178
atgctaggat ccaaaccaag agttcatttg tatatatttg cctgtgcctc tcaacagggt 60
tctaccatgg gtgacagggg aacaagcaat cactcagaaa tgactgactt cattcttgca 120
ggcttcaggg tacgccaga gctccacatt ctctctctcc tgctattttt gtttgtttat 180
gccatgatcc ttctagggaa tggtgggatg atgaccatta ttatgactga tcctcggctg 240
aacacaccaa tgtatttttt cctaggcaat ctctccttca ttgactcttt ctattcatct 300
gttattgaac ccaaggctat gatcaacttc tggctcgaaa acaagtctat ctcttttgca 360
ggctgtgtgg ccagctctt tctctttgcc ctctcattg tgactgaggg atttctcctg 420
gcggccatgg cttatgaccg ctttattgcc atctgcaacc ctctgctcta ctctgttcaa 480
atgtccacac gtctgtgtac tcagttgggtg gctgggtcct atttttgtgg ctgcattagc 540
tcagttattc agactagcat gacatttact ttatcttttt gcgcttctcg ggctgttgac 600
cacttttact gtgattctcg cccacttcag agactgtctt gttctgatct ctttatccat 660
agaatgatat ttttttcctt atcatgtatt attactctgc ctactatcat agtcattata 720
gtatcttaca tgtatattgt gtccacagtt ctaaagatac attctactga gggacataag 780
aaggccttct ccacctgcag ctctcacctg ggagttgtga gtgtgctgta tgggtgctgtc 840
ttttttatgt atctcactcc tgacagattt cctgagctga gtaaagtggc atccttatgt 900
tactccctag tcaactccat gttgaatcct ttgatttact ctctgaggaa caaagatgtc 960
caagaggctc taaaaaaatt tctagagaag aaaaatatta ttctttga 1008

<210> 179
<211> 316
<212> PRT
<213> Homo sapiens

<400> 179
Met Ile Cys Glu Asn His Thr Arg Val Thr Glu Phe Ile Leu Leu Gly
1 5 10 15
Phe Thr Asn Asn Pro Glu Met Gln Val Ser Leu Phe Ile Phe Phe Leu
20 25 30
Ala Ile Tyr Thr Val Thr Leu Leu Gly Asn Phe Leu Ile Val Thr Val
35 40 45
Thr Ser Val Asp Leu Ala Leu Gln Thr Pro Met Tyr Phe Phe Leu Gln
50 55 60
Asn Leu Ser Leu Leu Glu Val Cys Phe Thr Leu Val Met Val Pro Lys
65 70 75 80
Met Leu Val Asp Leu Val Ser Pro Arg Lys Ile Ile Ser Phe Val Gly
85 90 95
Cys Gly Thr Gln Met Tyr Phe Phe Phe Phe Gly Ser Ser Glu Cys
100 105 110
Phe Leu Leu Ser Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn
115 120 125
Pro Leu His Tyr Ser Val Ile Met Asn Arg Ser Leu Cys Leu Trp Met

130	135	140
Ala Ile Gly Ser Trp Met Ser Gly Val Pro Val Ser Met Leu Gln Thr		
145	150	155 160
Ala Trp Met Met Ala Leu Pro Phe Cys Gly Pro Asn Ala Val Asp His		
	165	170 175
Phe Phe Cys Asp Gly Pro Pro Val Leu Lys Leu Val Thr Val Asp Thr		
	180	185 190
Thr Met Tyr Glu Met Gln Ala Leu Ala Ser Thr Leu Leu Phe Ile Met		
	195	200 205
Phe Pro Phe Cys Leu Ile Leu Val Ser Tyr Thr Arg Ile Ile Ile Thr		
	210	215 220
Ile Leu Arg Met Ser Ser Ala Thr Gly Arg Gln Lys Ala Phe Ser Thr		
	225	230 235 240
Cys Ser Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ser		
	245	250 255
Leu Thr Tyr Leu Arg Pro Lys Ser Asn Gln Ser Pro Glu Ser Lys Lys		
	260	265 270
Leu Val Ser Leu Ser Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Ile		
	275	280 285
Ile Tyr Gly Leu Arg Asn Asn Glu Val Lys Gly Ala Val Lys Arg Thr		
	290	295 300
Ile Thr Gln Lys Val Leu Gln Lys Leu Asp Val Phe		
305	310	315

<210> 180
 <211> 951
 <212> DNA
 <213> Homo sapiens

<400> 180
 atgatctgtg aaaatcacac cagagtcact gaatttattc ttcttggttt tacaaacaac 60
 cccgagatgc aagtttccct ctttattttt ttctggcca tttatacagt cactttgttg 120
 ggcaactttc ttattgtcac agttaccagt gtggatctcg cacttcaaac acccatgtac 180
 ttctttcttc aaaatctgtc acttcttgaa gtatgtttca ccttggttat ggtgccaaaa 240
 atgcttgtag atctagtgtc cccaaggaaa attatctctt ttgtgggctg tggtagccag 300
 atgtacttct tcttcttctt tggcagttct gaatgtttcc ttctctccat gatggcttat 360
 gatcgctttg tggccatctg taacctctc cattattcag tcataatgaa caggtcccta 420
 tgcttggtga tggccatagg ctcttgatg tccggtgttc ctgtgtctat gctacagaca 480
 gcttgatga tggcccttc tttctgtgga ccaaatgccg tggaccactt tttctgtgat 540
 ggtccccag tgtaaaact agtcacagt gatacaacca tgtatgaaat gcaagcactt 600
 gcctccacac tcctgtttat catgtttccc tttgtctca ttttggtttc ctacaccgc 660
 attatcataa caattctgag gatgtcctct gccactggcc gccagaaggc attttctact 720
 tgttctcac acctcattgt ggtgtccctc ttctacggaa cagccagtct gacctactg 780
 cggcccaaat caaaccagtc ccctgagagc aagaagctag tgtcattgtc ctacactgtc 840
 atcacaccta tgctaaacc catcatctac ggctgagga acaatgaagt gaaaggggct 900
 gtcaagagga caatcactca aaaagtctta cagaagttag atgtgttttg a 951

<210> 181

<211> 362
<212> PRT
<213> Homo sapiens

<400> 181

Met	Thr	Glu	Phe	His	Leu	Gln	Ser	Gln	Met	Pro	Ser	Ile	Arg	Leu	Ile		
1				5					10					15			
Phe	Arg	Arg	Leu	Ser	Leu	Gly	Arg	Ile	Lys	Pro	Ser	Gln	Ser	Pro	Arg		
			20					25					30				
Cys	Ser	Thr	Ser	Phe	Met	Val	Val	Pro	Ser	Phe	Ser	Ile	Ala	Glu	His		
		35					40					45					
Trp	Arg	Arg	Met	Lys	Gly	Ala	Asn	Leu	Ser	Gln	Gly	Met	Glu	Phe	Glu		
	50					55					60						
Leu	Leu	Gly	Leu	Thr	Thr	Asp	Pro	Gln	Leu	Gln	Arg	Leu	Leu	Phe	Val		
65					70					75					80		
Val	Phe	Leu	Gly	Met	Tyr	Thr	Ala	Thr	Leu	Leu	Gly	Asn	Leu	Val	Met		
				85					90					95			
Phe	Leu	Leu	Ile	His	Val	Ser	Ala	Thr	Leu	His	Thr	Pro	Met	Tyr	Ser		
			100					105					110				
Leu	Leu	Lys	Ser	Leu	Ser	Phe	Leu	Asp	Phe	Cys	Tyr	Ser	Ser	Thr	Val		
		115					120					125					
Val	Pro	Gln	Thr	Leu	Val	Asn	Phe	Leu	Ala	Lys	Arg	Lys	Val	Ile	Ser		
	130					135					140						
Tyr	Phe	Gly	Cys	Met	Thr	Gln	Met	Phe	Phe	Tyr	Ala	Gly	Phe	Ala	Thr		
145					150					155					160		
Ser	Glu	Cys	Tyr	Leu	Ile	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Ala	Ala		
				165					170					175			
Ile	Cys	Asn	Pro	Leu	Leu	Tyr	Ser	Thr	Ile	Met	Ser	Pro	Glu	Val	Cys		
		180						185					190				
Ala	Ser	Leu	Ile	Val	Gly	Ser	Tyr	Ser	Ala	Gly	Phe	Leu	Asn	Ser	Leu		
		195					200					205					
Ile	His	Thr	Gly	Cys	Ile	Phe	Ser	Leu	Lys	Phe	Cys	Gly	Ala	His	Val		
	210					215					220						
Val	Thr	His	Phe	Phe	Cys	Asp	Gly	Pro	Pro	Ile	Leu	Ser	Leu	Ser	Cys		
225					230					235					240		
Val	Asp	Thr	Ser	Leu	Cys	Glu	Ile	Leu	Leu	Phe	Ile	Phe	Ala	Gly	Phe		
				245				250						255			
Asn	Leu	Leu	Ser	Cys	Thr	Leu	Thr	Ile	Leu	Ile	Ser	Tyr	Phe	Leu	Ile		
			260					265					270				
Leu	Asn	Thr	Ile	Leu	Lys	Met	Ser	Ser	Ala	Gln	Gly	Arg	Phe	Lys	Ala		
		275					280					285					
Phe	Ser	Thr	Cys	Ala	Ser	His	Leu	Thr	Ala	Ile	Cys	Leu	Phe	Phe	Gly		
		290				295					300						

Thr Thr Leu Phe Met Tyr Leu Arg Pro Arg Ser Ser Tyr Ser Leu Thr
305 310 315 320

Gln Asp Arg Thr Val Ala Val Ile Tyr Thr Val Val Ile Pro Val Leu
325 330 335

Asn Pro Leu Met Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu
340 345 350

Ile Lys Val Trp Gly Arg Lys Thr Met Glu
355 360

<210> 182
<211> 1089
<212> DNA
<213> Homo sapiens

<400> 182
atgacagagt ttcattctgca aagccaaatg ccctcaataa gactcatctt cagaaggctg 60
tccttaggca gaattaaacc cagtcagagc cccagggtgt caacctcatt tatgggtggg 120
ccttctttct ccattgcaga gcaactggaga aggatgaaag gggcaaaccct gagccaaggg 180
atggagtttg agctcttggg cctcaccact gacccccagc tccagaggct gctcttcgtg 240
gtgttccttg gcatgtacac agccactctg ctgggggaacc tgggtcatgt cctcctgac 300
catgtgagtg ccacctgca cacacccatg tactccctcc tgaagagcct ctcttcttg 360
gatttctgct actcctccac ggttgtgccc cagaccctgg tgaacttctt ggccaagagg 420
aaagtgatct cttatttttg ctgcatgact cagatgttct tctatgcggg ttttgccacc 480
agtgagtgct atctcatcgc tgccatggcc tatgaccgct atgccgctat ttgtaacccc 540
ctgctctact caaccatcat gtctcctgag gtctgtgcct cgctgattgt gggctcctac 600
agtgcaggat tcctcaattc tcttatccac actggctgta tctttagtct gaaattctgc 660
ggtgctcatg tcgtcactca cttcttctgt gatgggccac ccattcctgtc cttgtcttgt 720
tgagacacct cactgtgtga gatcctgctc ttcatttttg ctggtttcaa ccttttgagc 780
tgacacctca ccattctgat ctctacttcc ttaattctca acaccatcct gaaaatgagc 840
tcggcccagg gcagggttaa ggcattttcc acctgtgcat cccacctcac tgccatctgc 900
ctcttctttg gcacaacact ttttatgtac ctgcgccccg ggtccagcta ctcttgacc 960
caggaccgca cagttgctgt catctacaca gtggtgatcc cagtgtgaa cccctcatg 1020
tactctttga gaaacaagga tgtgaagaaa gctttaataa aggtttgggg taggaaaaca 1080
atggaatga 1089

<210> 183
<211> 314
<212> PRT
<213> Homo sapiens

<400> 183
Met Arg Gly Phe Asn Lys Thr Thr Val Val Thr Gln Phe Ile Leu Val
1 5 10 15
Gly Phe Ser Ser Leu Gly Glu Leu Gln Leu Leu Leu Phe Val Ile Phe
20 25 30
Leu Leu Leu Tyr Leu Thr Ile Leu Val Ala Asn Val Thr Ile Met Ala
35 40 45
Val Ile Arg Phe Ser Trp Thr Leu His Thr Pro Met Tyr Gly Phe Leu
50 55 60
Phe Ile Leu Ser Phe Ser Glu Ser Cys Tyr Thr Phe Val Ile Ile Pro
65 70 75 80

Gln Leu Leu Val His Leu Leu Ser Asp Thr Lys Thr Ile Ser Phe Met
 85 90 95
 Ala Cys Ala Thr Gln Leu Phe Phe Phe Leu Gly Phe Ala Cys Thr Asn
 100 105 110
 Cys Leu Leu Ile Ala Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125
 His Pro Leu Arg Tyr Thr Leu Ile Ile Asn Lys Arg Leu Gly Leu Glu
 130 135 140
 Leu Ile Ser Leu Ser Gly Ala Thr Gly Phe Phe Ile Ala Leu Val Ala
 145 150 155 160
 Thr Asn Leu Ile Cys Asp Met Arg Phe Cys Gly Pro Asn Arg Val Asn
 165 170 175
 His Tyr Phe Cys Asp Met Ala Pro Val Ile Lys Leu Ala Cys Thr Asp
 180 185 190
 Thr His Val Lys Glu Leu Ala Leu Phe Ser Leu Ser Ile Leu Val Ile
 195 200 205
 Met Val Pro Phe Leu Leu Ile Leu Ile Ser Tyr Gly Phe Ile Val Asn
 210 215 220
 Thr Ile Leu Lys Ile Pro Ser Ala Glu Gly Lys Lys Ala Phe Val Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Val Val Phe Val His Tyr Gly Cys Ala Ser
 245 250 255
 Ile Ile Tyr Leu Arg Pro Lys Ser Lys Ser Ala Ser Asp Lys Asp Gln
 260 265 270
 Leu Val Ala Val Thr Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Leu
 275 280 285
 Val Tyr Ser Leu Arg Asn Lys Glu Val Lys Thr Ala Leu Lys Arg Val
 290 295 300
 Leu Gly Met Pro Val Ala Thr Lys Met Ser
 305 310

<210> 184
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 184
 atgcgaggtt tcaacaaaac cactgtgggtt acacagttca tcttggtggg tttctccagc 60
 ctgggggagc tccagctgct gctttttgtc atctttcttc tctatactt gacaatcctg 120
 gtggccaatg tgaccatcat ggccgttatt cgcttcagct ggactctcca cactcccatg 180
 tatggctttc tattcatcct ttcattttct gagtctgct acacttttgt catcatccct 240
 cagctgctgg tccacctgct ctcagacacc aagaccatct ccttcatggc ctgtgccacc 300
 cagctgtttc ttttccttgg ctttgcttgc accaactgcc tctcattgc tgtgatggga 360
 tatgatcgct atgtagcaat ttgtcacct ctgaggtaca cactcatcat aaacaaaagg 420
 ctgggggttg agttgatttc tctctcagga gccacaggtt tctttattgc tttggtggcc 480

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accaaactca tttgtgacat gcgtttttgt ggccccaaca gggttaacca ctatttctgt 540
gacatggcac ctgttatcaa gttagcctgc actgacaccc atgtgaaaga gctggcctta 600
tttagcctca gcacccctggg aattatgggt ccttttctgt taattctcat atcctatggc 660
ttcatagtta acaccatcct gaagatcccc tcagctgagg gcaagaaggc ctttgtcacc 720
tgtgcctcac atctcactgt ggtctttgtc cactatggct gtgcctctat catctatctg 780
cggcccaagt ccaagtctgc ctcagacaag gatcagttgg tggcagtgac ctacacagtg 840
gttactccct tacttaatcc tcttgtctac agtctgagga acaaagaggt aaaaactgca 900
ttgaaaagag ttcttggaat gcctgtggca accaagatga gctaa 945

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<210> 185
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 185
 Met Glu Arg Val Asn Glu Thr Val Val Arg Glu Val Ile Phe Leu Gly
 1 5 10 15
 Phe Ser Ser Leu Ala Arg Leu Gln Gln Leu Leu Phe Val Ile Phe Leu
 20 25 30
 Leu Leu Tyr Leu Phe Thr Leu Gly Thr Asn Ala Ile Ile Ile Ser Thr
 35 40 45
 Ile Val Leu Asp Arg Ala Leu His Ile Pro Met Tyr Phe Phe Leu Ala
 50 55 60
 Ile Leu Ser Cys Ser Glu Ile Cys Tyr Thr Phe Ile Ile Val Pro Lys
 65 70 75 80
 Met Leu Val Asp Leu Leu Ser Gln Lys Lys Thr Ile Ser Phe Leu Gly
 85 90 95
 Cys Ala Ile Gln Met Phe Ser Phe Leu Phe Leu Gly Cys Ser His Ser
 100 105 110
 Phe Leu Leu Ala Val Met Gly Tyr Asp Arg Tyr Ile Ala Ile Cys Asn
 115 120 125
 Pro Leu Arg Tyr Ser Val Leu Met Gly His Gly Val Cys Met Gly Leu
 130 135 140
 Val Ala Ala Ala Cys Ala Cys Gly Phe Thr Val Ala Gln Ile Ile Thr
 145 150 155 160
 Ser Leu Val Phe His Leu Pro Phe Tyr Ser Ser Asn Gln Leu His His
 165 170 175
 Phe Phe Cys Asp Ile Ala Pro Val Leu Lys Leu Ala Ser His His Asn
 180 185 190
 His Phe Ser Gln Ile Val Ile Phe Met Leu Cys Thr Leu Val Leu Ala
 195 200 205
 Ile Pro Leu Leu Leu Ile Leu Val Ser Tyr Val His Ile Leu Ser Ala
 210 215 220
 Ile Leu Gln Phe Pro Ser Thr Leu Gly Arg Cys Lys Ala Phe Ser Thr
 225 230 235 240

Cys Val Ser His Leu Ile Ile Val Thr Val His Tyr Gly Cys Ala Ser
245 250 255

Phe Ile Tyr Leu Arg Pro Gln Ser Asn Tyr Ser Ser Ser Gln Asp Ala
260 265 270

Leu Ile Ser Val Ser Tyr Thr Ile Ile Thr Pro Leu Phe Asn Pro Met
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Phe Lys Ser Ala Leu Cys Lys Ile
290 295 300

Val Arg Arg Thr Ile Ser Leu Leu
305 310

<210> 186
<211> 939
<212> DNA
<213> Homo sapiens

<400> 186
atggagcggg tcaatgagac tgtggtgaga gaggtcatct tcctcggctt ctcacccctg 60
gccaggctgc agcagctgct ctttggtatc ttccctgctcc tctacctgtt cactctgggc 120
accaatgcaa tcatcatttc caccattgtc ctggacaggg cccttcatat ccccatgtac 180
ttcttccttg ccatectctc ttgctctgag atttgctaca ccttcacatc tgtaccaag 240
atgctgggtg acctgctgtc ccagaagaag accatttctt tcctgggctg tgccatccaa 300
atgttttcc tctcttccct tggctgctct cactcctttc tgctggcagt catgggttat 360
gatcggtaca tagccatctg taaccactg cgctactcag tgctaattggg acatgggggtg 420
tgtatgggac tagtggtgct tgccctgtgcc tgtggcttca ctggtgcaca gatcatcaca 480
tccttggtat ttcacctgcc tttttattcc tccaatcaac tacatcactt cttctgtgac 540
attgctcctg tctcaagct ggcactctac cataaccact ttagtcagat tgtcatcttc 600
atgctctgta cattggctct ggctatcccc ttattgttga tcttggtgtc ctatgttcac 660
atcctctctg ccataactca gtttctctcc acactgggta ggtgcaaagc tttttctacc 720
tgtgtatctc acctcattat tgtcactgtc cactatggct gtgcctcctt tatctactta 780
aggcctcagt ccaactactc ctcaagccag gatgctctaa tatcagtatc ctacactatt 840
ataactccat tgttcaacct aatgatttat agcttgagaa ataaagagtt caaatcagct 900
ctttgtaaaa ttgtgagaag aacaatttcc ctgttgtaa 939

<210> 187
<211> 312
<212> PRT
<213> Homo sapiens

<400> 187
Met Asp Thr Gly Asn Trp Ser Gln Val Ala Glu Phe Ile Ile Leu Gly
1 5 10 15
Phe Pro His Leu Gln Gly Val Gln Ile Tyr Leu Phe Leu Leu Leu Leu
20 25 30
Leu Ile Tyr Leu Met Thr Val Leu Gly Asn Leu Leu Ile Phe Leu Val
35 40 45
Val Cys Leu Asp Ser Arg Leu His Thr Pro Met Tyr His Phe Val Ser
50 55 60
Ile Leu Ser Phe Ser Glu Leu Gly Tyr Thr Ala Ala Thr Ile Pro Lys
65 70 75 80

Met Leu Ala Asn Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Ser Gly
 85 90 95
 Cys Leu Leu Gln Ile Tyr Phe Phe His Ser Leu Gly Ala Thr Glu Cys
 100 105 110
 Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Pro Thr Leu Met Thr Pro Thr Leu Cys Ala Glu Ile
 130 135 140
 Ala Ile Gly Cys Trp Leu Gly Gly Leu Ala Gly Pro Val Val Glu Ile
 145 150 155 160
 Ser Leu Ile Ser Arg Leu Pro Phe Cys Gly Pro Asn Arg Ile Gln His
 165 170 175
 Val Phe Cys Asp Phe Pro Pro Val Leu Ser Leu Ala Cys Thr Asp Thr
 180 185 190
 Ser Ile Asn Val Leu Val Asp Phe Val Ile Asn Ser Cys Lys Ile Leu
 195 200 205
 Ala Thr Phe Leu Leu Ile Leu Cys Ser Tyr Val Gln Ile Ile Cys Thr
 210 215 220
 Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Arg Lys Ala Ile Ser Thr
 225 230 235 240
 Cys Ala Ser His Phe Thr Val Val Leu Ile Phe Tyr Gly Ser Ile Leu
 245 250 255
 Ser Met Tyr Val Gln Leu Lys Lys Ser Tyr Ser Leu Asp Tyr Asp Gln
 260 265 270
 Ala Leu Ala Val Val Tyr Ser Val Leu Thr Pro Phe Leu Asn Pro Phe
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Glu Ala Val Arg Arg Gln
 290 295 300
 Leu Lys Arg Ile Gly Ile Leu Ala
 305 310

<210> 188
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 188
 atggacacag ggaactggag ccaggtagca gaattcatca tcttgggctt ccccatctc 60
 cagggtgtcc agatttatct cttcctcttg ttgcttctca tttacctcat gactgtgttg 120
 ggaaacctgc tgatattcct ggtggctctgc ctggactccc ggcttcacac acccatgtac 180
 cactttgtca gcattctctc cttctcagag cttggctata cagctgccac catccctaag 240
 atgctggcaa acttgctcag tgagaaaaag accatttcat tctctgggtg tctcctgcag 300
 atctatttct ttcactccct tggagcgact gagtgctatc tcctgacagc tatggcctac 360
 gataggtatt tagccattct cgggccctc cactacccaa ccctcatgac cccaacatt 420
 tgtgcagaga ttgccatttg ctggttggtg ggaggcttgg ctgggccagt agttgaaatt 480
 tccttgattt cagcctccc attctgtggc cccaatcgca ttcagcacgt cttttgtgac 540

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ttccctcctg tgctgagttt ggcttgcaact gatacgtcta taaatgtcct agtagatttt 600
gttataaatt cctgcaagat cctagccacc ttctgtctga tcctctgctc ctatgtgcag 660
atcatctgca cagtgtcag aattccctca gctgccggca agaggaaggc catctccacg 720
tgtgcctccc acttcaactgt ggttctcatc ttctatggga gcatcctttc catgtatgtg 780
cagctgaaga agagctactc actggactat gaccaggccc tggcagtggg ctactcagtg 840
ctcacaccct tcctcaaccc cttcatctac agcttgcgca acaaggagat caaggaggct 900
gtgaggaggc agctaaagag aattgggata ttggcatga 939

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<210> 189

<211> 319

<212> PRT

<213> Homo sapiens

<400> 189

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Met Pro Val Gly Lys Leu Val Phe Asn Gln Ser Glu Pro Thr Glu Phe
  1             5             10             15

Val Phe Arg Ala Phe Thr Thr Ala Thr Glu Phe Gln Val Leu Leu Phe
      20             25             30

Leu Leu Phe Leu Leu Leu Tyr Leu Met Ile Leu Cys Gly Asn Thr Ala
      35             40             45

Ile Ile Trp Val Val Cys Thr His Ser Thr Leu Arg Thr Pro Met Tyr
      50             55             60

Phe Phe Leu Ser Asn Leu Ser Phe Leu Glu Leu Cys Tyr Thr Thr Val
      65             70             75             80

Val Val Pro Leu Met Leu Ser Asn Ile Leu Gly Ala Gln Lys Pro Ile
      85             90             95

Ser Leu Ala Gly Cys Gly Ala Gln Met Phe Phe Phe Val Thr Leu Gly
      100            105            110

Ser Thr Asp Cys Phe Leu Leu Ala Ile Met Ala Tyr Asp Arg Tyr Val
      115            120            125

Ala Ile Cys His Pro Leu His Tyr Thr Leu Ile Met Thr Arg Glu Leu
      130            135            140

Cys Thr Gln Met Leu Gly Gly Ala Leu Gly Leu Ala Leu Phe Pro Ser
      145            150            155            160

Leu Gln Leu Thr Ala Leu Ile Phe Thr Leu Pro Phe Cys Gly His His
      165            170            175

Gln Glu Ile Asn His Phe Leu Cys Asp Val Pro Pro Val Leu Arg Leu
      180            185            190

Ala Cys Ala Asp Ile Arg Val His Gln Ala Val Leu Tyr Val Val Ser
      195            200            205

Ile Leu Val Leu Thr Ile Pro Phe Leu Leu Ile Cys Val Ser Tyr Val
      210            215            220

Phe Ile Thr Cys Ala Ile Leu Ser Ile Arg Ser Ala Glu Gly Arg Arg
      225            230            235            240

Arg Ala Phe Ser Thr Cys Ser Phe His Leu Thr Val Val Leu Leu Gln

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245

250

255

Tyr Gly Cys Cys Ser Leu Val Tyr Leu Arg Pro Arg Ser Ser Thr Ser
 260 265 270

Glu Asp Glu Asp Ser Gln Ile Ala Leu Val Tyr Thr Phe Val Thr Pro
 275 280 285

Leu Leu Asn Pro Leu Leu Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly
 290 295 300

Ala Leu Arg Ser Ala Ile Ile Arg Lys Ala Ala Ser Asp Ala Asn
 305 310 315

<210> 190

<211> 960

<212> DNA

<213> Homo sapiens

<400> 190

atgcctgtgg ggaaacttgt cttcaaccag tctgagccca ctgagtttgt gttccgtgcg 60
 ttcaccacag ccactgaatt ccaggttctt ctcttccttc tcttcctcct cctctacttg 120
 atgatcctct gtggcaacac agccatcatc tgggtgggtg gcacacacag caccctccgc 180
 acccggatgt atttcttcct gtccaacctg tctttcctgg aactctgcta caccaccgtg 240
 gtagtaccct tgatgctttc caacattttg ggggccaga agccatttc gttggctgga 300
 tgtggggccc aaatgttctt ctttgtcacc ctccggcagca cggactgttt cctcttggcg 360
 atcatggcct atgaccgcta tgtggctatc tgccaccgcg tgcactacac cctcatcatg 420
 acccgcgagc tgtgcacgca gatgctgggt ggggccctgg gcctggccct cttccccctcc 480
 ctgcagctca ccgccttaat cttcacctcg cctttttgcg gccaccacca ggaaatcaac 540
 cacttccctc gcgatgtgcc tcccgtcctg cgccctggcct gcgctgacat ccgcgtgcac 600
 caggctgtcc tctatgtcgt gagcatcctc gtgctgacca tccccctcct gctcatctgc 660
 gtctcctacg tgttcatcac ctgtgccatc ctgagcatcc gttctgcccga gggccgcccgc 720
 cgggccttct ccacctgctc ctccacctc accgtgggtc tgctgcagta tggctgctgc 780
 agcctcgtgt acctgcgtcc tcggtccagc acctcagagg atgaggacag ccaaatcgcg 840
 ttggtctaca cctttgtcac ccccttactc aaccctttgc tttacagcct taggaacaag 900
 gatgtcaaag gtgctctgag gagtgccatt atccgtaaag cagcctctga cgccaactga 960

<210> 191

<211> 310

<212> PRT

<213> Homo sapiens

<400> 191

Met Ala Glu Met Asn Leu Thr Leu Val Thr Glu Phe Leu Leu Ile Ala
 1 5 10 15

Phe Thr Glu Tyr Pro Glu Trp Ala Leu Pro Leu Phe Leu Leu Leu Leu
 20 25 30

Phe Met Tyr Leu Ile Thr Val Leu Gly Asn Leu Glu Met Ile Ile Leu
 35 40 45

Ile Leu Met Asp His Gln Leu His Ala Pro Met Tyr Phe Leu Leu Ser
 50 55 60

His Leu Ala Phe Met Asp Val Cys Tyr Ser Ser Ile Thr Val Pro Gln
 65 70 75 80

Met Leu Ala Val Leu Leu Glu His Gly Ala Ala Leu Ser Tyr Thr Arg

85

90

95

Cys Ala Ala Gln Phe Phe Leu Phe Thr Phe Phe Gly Ser Ile Asp Cys
100 105 110

Tyr Leu Leu Ala Leu Met Ala Tyr Asp Arg Tyr Leu Ala Val Cys Gln
115 120 125

Pro Leu Leu Tyr Val Thr Ile Leu Thr Gln Gln Ala Arg Leu Ser Leu
130 135 140

Val Ala Gly Ala Tyr Val Ala Gly Leu Ile Ser Ala Leu Val Arg Thr
145 150 155 160

Val Ser Ala Phe Thr Leu Ser Phe Cys Gly Thr Ser Glu Ile Asp Phe
165 170 175

Ile Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Thr Cys Gly Glu Ser
180 185 190

Tyr Thr Gln Glu Val Leu Ile Ile Met Phe Ala Ile Phe Val Ile Pro
195 200 205

Ala Ser Met Val Val Ile Leu Val Ser Tyr Leu Phe Ile Ile Val Ala
210 215 220

Ile Met Gly Ile Pro Ala Gly Ser Gln Ala Lys Thr Phe Ser Thr Cys
225 230 235 240

Thr Ser His Leu Thr Ala Val Ser Leu Phe Phe Gly Thr Leu Ile Phe
245 250 255

Met Tyr Leu Arg Gly Asn Ser Asp Gln Ser Ser Glu Lys Asn Arg Val
260 265 270

Val Ser Val Leu Tyr Thr Glu Val Ile Pro Met Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Leu Arg Lys Ile Leu
290 295 300

Asn Arg Ala Lys Leu Ser
305 310

<210> 192

<211> 933

<212> DNA

<213> Homo sapiens

<400> 192

atggcagaga	tgaacctcac	cttggtgacc	gagttcctcc	ttattgcatt	cactgaatat	60
cctgaatggg	cactccctct	cttcctcttg	ttattattta	tgtatctcat	caccgtattg	120
gggaacttag	agatgattat	tctgatcctc	atggatcacc	agctccacgc	tccaatgtat	180
ttccttctga	gtcacctcgc	tttcatggac	gtctgtact	catctatcac	tgtcccccag	240
atgctggcag	tgctgtctga	gcatggggca	gctttatctt	acacacgctg	tgctgtcag	300
ttctttctgt	tcaccttctt	tggttccatc	gactgctacc	tcttggccct	catggcctat	360
gaccgctact	tggtgtgtg	ccagcccctg	ctttatgtca	ccatcctgac	acagcaggcc	420
cgcttgagtc	ttgtggctgg	ggcttacggt	gctgggtctca	tcagtgcctt	ggcgcgagaca	480
gtctcagcct	tcactctctc	cttctgtgga	accagtgaga	ttgactttat	tttctgtgac	540
ctccctcctc	tgttaaagtt	gacctgtggg	gagagctaca	ctcaagaagt	gctgattatt	600

atgtttgccca tttttgtcat ccctgcttcc atgggtggtga tcttggtgtc ctacctgttt 660
 atcatcgtagg ccatcatggg gatccctgct ggaagccagg ccaagacctt ctccacctgc 720
 acctcccacc tcaactgctgt gtcactcttc tttggtaccc tcatcttcat gtacttgaga 780
 ggtaactcag atcagtcttc ggagaagaat cgggtagtgt ctgtgcttta cacagaggtc 840
 atccccatgt tgaatcccct catctacagc ctgaggaaca aggaagtgaa ggaggccctg 900
 agaaaaattc tcaatagagc caagttgtcc taa 933

<210> 193
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 193
 Met Gln Gly Leu Asn His Thr Ser Val Ser Glu Phe Ile Leu Val Gly
 1 5 10 15
 Phe Ser Ala Phe Pro His Leu Gln Leu Met Leu Phe Leu Leu Phe Leu
 20 25 30
 Leu Met Tyr Leu Phe Thr Leu Leu Gly Asn Leu Leu Ile Met Ala Thr
 35 40 45
 Val Trp Ser Glu Arg Ser Leu His Met Pro Met Tyr Leu Phe Leu Cys
 50 55 60
 Ala Leu Ser Ile Thr Glu Ile Leu Tyr Thr Val Ala Ile Ile Pro Arg
 65 70 75 80
 Met Leu Ala Asp Leu Leu Ser Thr Gln Arg Ser Ile Ala Phe Leu Ala
 85 90 95
 Cys Ala Ser Gln Met Phe Phe Ser Phe Ser Phe Gly Phe Thr His Ser
 100 105 110
 Phe Leu Leu Thr Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Arg Tyr Asn Val Leu Met Ser Leu Arg Gly Cys Thr Cys Arg
 130 135 140
 Val Gly Cys Ser Trp Ala Gly Gly Leu Val Met Gly Met Val Val Thr
 145 150 155 160
 Ser Ala Ile Phe His Leu Ala Phe Cys Gly His Lys Glu Ile His His
 165 170 175
 Phe Phe Cys His Val Pro Pro Leu Leu Lys Leu Ala Cys Gly Asp Asp
 180 185 190
 Val Leu Val Val Ala Lys Gly Val Gly Leu Val Cys Ile Thr Ala Leu
 195 200 205
 Leu Gly Cys Phe Leu Leu Ile Leu Leu Ser Tyr Ala Phe Ile Val Ala
 210 215 220
 Ala Ile Leu Lys Ile Pro Ser Ala Glu Gly Arg Asn Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ala Ser His Leu Thr Val Val Val Val His Tyr Gly Phe Ala
 245 250 255

Ser Val Ile Tyr Leu Lys Pro Lys Gly Pro Gln Ser Pro Glu Gly Asp
260 265 270

Thr Leu Met Gly Ile Thr Tyr Thr Val Leu Thr Pro Phe Leu Ser Pro
275 280 285

Ile Ile Phe Ser Leu Arg Asn Lys Glu Leu Lys Val Ala Met Lys Lys
290 295 300

Thr Cys Phe Thr Lys Leu Phe Pro Gln Asn Cys
305 310 315

<210> 194
<211> 948
<212> DNA
<213> Homo sapiens

<400> 194
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ccccacctcc agctgatgct ctctctgctg ttctgctga tgtacctgtt cacgctgctg 120
ggcaacctgc tcatcatggc cactgtctgg agcgagcgca gcctccacat gcccatgtac 180
ctcttcctgt gtgccctctc catcaccgag atcctctaca ccgtggccat catcccgcgc 240
atgctggccg acctgctgtc caccagcgc tccatcgctt tcctggcctg tgccagtcag 300
atgttcttct ccttcagctt cggcttcacc cactccttcc tgctcactgt catgggctac 360
gaccgctacg tggccatctg ccacccctg cgttacaacg tgctcatgag cctgcggggc 420
tgcacctgcc ggggtgggctg ctctggtggc ggtggcttgg tcatggggat ggtgggtgacc 480
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gtgccacctc tgttgaagtt ggctgtgga gatgatgtgc tgggtgggtggc caaaggcgtg 600
ggcttgggtg gtatcacggc cctgctgggc tgttttctcc tcctcctcct ctctatgcc 660
ttcatcgctg ccgccatctt gaagatccct tctgctgaag gtcggaacaa ggccttctcc 720
acctgtgctt ctcacctcac tgtggtggtc gtgcactatg gctttgcctc cgctcatttac 780
ctgaagccca aagggtcccca gtctccggaa ggagacacct tgatgggcat cacctacacg 840
gtcctcacac ctttctcag ccccatcatc ttcagcctca ggaacaagga gctgaaggctc 900
gccatgaaga agacttgctt caccaaactc tttccacaga actgctga 948

<210> 195
<211> 313
<212> PRT
<213> Homo sapiens

<400> 195
Met Glu Thr Ala Asn Tyr Thr Lys Val Thr Glu Phe Val Leu Thr Gly
1 5 10 15

Leu Ser Gln Thr Pro Glu Val Gln Leu Val Leu Phe Val Ile Phe Leu
20 25 30

Ser Phe Tyr Leu Phe Ile Leu Pro Gly Asn Ile Leu Ile Ile Cys Thr
35 40 45

Ile Ser Leu Asp Pro His Leu Thr Ser Pro Met Tyr Phe Leu Leu Ala
50 55 60

Asn Leu Ala Phe Leu Asp Ile Trp Tyr Ser Ser Ile Thr Ala Pro Glu
65 70 75 80

Met Leu Ile Asp Phe Phe Val Glu Arg Lys Ile Ile Ser Phe Asp Gly
85 90 95

Cys Ile Ala Gln Leu Phe Phe Leu His Phe Ala Gly Ala Ser Glu Met
 100 105 110
 Phe Leu Leu Thr Val Met Ala Phe Asp Leu Tyr Thr Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Ala Thr Ile Met Asn Gln Arg Leu Cys Cys Ile Leu
 130 135 140
 Val Ala Leu Ser Trp Arg Gly Gly Phe Ile His Ser Ile Ile Gln Val
 145 150 155 160
 Ala Leu Ile Val Arg Leu Pro Phe Cys Gly Pro Asn Glu Leu Asp Ser
 165 170 175
 Tyr Phe Cys Asp Ile Thr Gln Val Val Arg Ile Ala Cys Ala Asn Thr
 180 185 190
 Phe Pro Glu Glu Leu Val Met Ile Cys Ser Ser Gly Leu Ile Ser Val
 195 200 205
 Val Cys Leu Ile Ala Leu Leu Met Ser Tyr Ala Phe Leu Leu Ala Leu
 210 215 220
 Phe Lys Lys Leu Ser Gly Ser Gly Glu Asn Thr Asn Arg Ala Met Ser
 225 230 235 240
 Thr Cys Tyr Ser His Ile Thr Ile Val Val Leu Met Phe Gly Pro Ser
 245 250 255
 Ile Tyr Ile Tyr Ala Arg Pro Phe Asp Ser Phe Ser Leu Asp Lys Val
 260 265 270
 Val Ser Val Phe Asn Thr Leu Ile Phe Pro Leu Arg Asn Pro Ile Ile
 275 280 285
 Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala Ala Met Arg Lys Leu Val
 290 295 300
 Thr Lys Tyr Ile Leu Cys Lys Glu Lys
 305 310

<210> 196
 <211> 942
 <212> DNA
 <213> Homo sapiens

<400> 196
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 ccagagggtcc aactagtcct atttggtata tttctatcct tctatttggt catcctacca 120
 ggaaatatcc ttatcatttg caccatcagt ctagaccctc atctgacctc tcctatgtat 180
 ttctgttggt ctaatctggc cttccttgat atttggtact cttccattac agcccctgaa 240
 atgctcatag acttctttgt ggagaggaag ataatttctt ttgatggatg cattgcacag 300
 ctcttcttct tacactttgc tggggcttcg gagatgttct tgctcacagt gatggcctt 360
 gacctctaca ctgctatctg ccgaccctc cactatgcta ccatcatgaa tcaacgtctc 420
 tgctgtatcc tgggtggctct ctctggagg gggggcttca ttcattctat catacagggtg 480
 gctctcattg ttcgacttcc tttctgtggg cccaatgagt tagacagtta cttctgtgac 540
 atcacacagg ttgtccggat tgctgtgcc aacaccttcc cagaggagtt agtgatgatc 600
 tgtagtagtg gtctgatctc tgtggtgtgt ttgattgctc tgtaaatgtc ctatgccttc 660

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cttctggcct tgttcaagaa actttcaggc tcaggtgaga ataccaacag ggccatgtcc 720
acctgctatt cccacattac cattgtggtg ctaatgtttg ggccatccat ctacatttat 780
gctcgcccat ttgactcggt ttccctagat aaagtgggtg ctgtgttcaa tactttaata 840
ttccctttac gtaatcccat tattttacaca ttgagaaaca aggaagtaaa ggcagccatg 900
aggaagttgg tcaccaaata tattttgtgt aaagagaagt ga 942

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<210> 197
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 197

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Met Glu Leu Trp Asn Phe Thr Leu Gly Ser Gly Phe Ile Leu Val Gly
  1             5             10             15

Ile Leu Asn Asp Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Ile Thr
          20             25             30

Ile Leu Tyr Leu Leu Ala Leu Ile Ser Asn Gly Leu Leu Leu Leu Ala
          35             40             45

Ile Thr Met Glu Ala Arg Leu His Met Pro Met Tyr Leu Leu Leu Gly
          50             55             60

Gln Leu Ser Leu Met Asp Leu Leu Phe Thr Ser Val Val Thr Pro Lys
          65             70             75             80

Ala Leu Ala Asp Phe Leu Arg Arg Glu Asn Thr Ile Ser Phe Gly Gly
          85             90             95

Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Met Gly Gly Ala Glu Asp
          100            105            110

Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
          115            120            125

Pro Leu Thr Tyr Met Thr Leu Met Ser Ser Arg Ala Cys Trp Leu Met
          130            135            140

Val Ala Thr Ser Trp Ile Leu Ala Ser Leu Ser Ala Leu Ile Tyr Thr
          145            150            155            160

Val Tyr Thr Met His Tyr Pro Phe Cys Arg Ala Gln Glu Ile Arg His
          165            170            175

Leu Leu Cys Glu Ile Pro His Leu Leu Lys Val Ala Cys Ala Asp Thr
          180            185            190

Ser Arg Tyr Glu Leu Met Val Tyr Val Met Gly Val Thr Phe Leu Ile
          195            200            205

Pro Ser Leu Ala Ala Ile Leu Ala Ser Tyr Thr Gln Ile Leu Leu Thr
          210            215            220

Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
          225            230            235            240

Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Ala Ala Thr
          245            250            255

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Phe Met Tyr Val Leu Pro Ser Ser Phe His Ser Thr Arg Gln Asp Asn
 260 265 270

Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Met Arg Ala Leu Arg Arg Val
 290 295 300

Leu Gly Lys Tyr Met Leu Pro Ala His Ser Thr Leu
 305 310 315

<210> 198
 <211> 951
 <212> DNA
 <213> Homo sapiens

<400> 198
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 agtgggtctc ctgaactgct ctgtgctaca attacaatcc tatacttggt ggccctgac 120
 agcaatggcc tactgtcctt ggctatcacc atggaagccc ggctccacat gcccatgtac 180
 ctctgcttg ggcagctctc tctcatggac ctctgttca catctgttg cactcccaag 240
 gcccttgccg actttctgcg cagagaaaac accatctcct ttggaggctg tgcccttcag 300
 atgttccttg cactgacaat ggggtgggtgct gaggacctcc tactggcctt catggcctat 360
 gacaggtatg tggccatttg tcatcctctg acatacatga ccctcatgag ctcaagagcc 420
 tgctggctca tgggtggccac gtcttgatc ctggcatccc taagtgccct aatatatacc 480
 gtgtatacca tgcactatcc cttctgcagg gccaggaga tcaggcatct tctctgtgag 540
 atccacact tgctgaagggt ggctgtgct gatacctcca gatatgagct catggtatat 600
 gtgatgggtg tgaccttctt gattccctct cttgctgcta tactggcctc ctatacacia 660
 attctactca ctgtgtctca tatgccatca aatgagggga ggaagaaagc cctgtgcacc 720
 tgctcttccc acctgactgt ggttgggatg ttctatggag ctgccacatt catgtatgtc 780
 ttgccagtt cctccacag caccagacaa gacaacatca tctctgtttt ctacacaatt 840
 gtactccag cctgaatcc actcatctac agcctgagga ataaggaggt catgcggggc 900
 ttgaggaggg tctgggaaa atacatgctg ccagcacact ccacgctcta g 951

<210> 199
 <211> 330
 <212> PRT
 <213> Homo sapiens

<400> 199
 Met Cys Ser Phe Phe Leu Cys Gln Thr Gly Lys Gln Ala Lys Ile Ser
 1 5 10 15
 Met Gly Glu Glu Asn Gln Thr Phe Val Ser Lys Phe Ile Phe Leu Gly
 20 25 30
 Leu Ser Gln Asp Leu Gln Thr Gln Ile Leu Leu Phe Ile Leu Phe Leu
 35 40 45
 Ile Ile Tyr Leu Leu Thr Val Leu Gly Asn Gln Leu Ile Ile Ile Leu
 50 55 60
 Ile Phe Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Arg
 65 70 75 80
 Asn Leu Ser Phe Ala Asp Leu Cys Phe Ser Thr Ser Ile Val Pro Gln
 85 90 95

Val Leu Val His Phe Leu Val Lys Arg Lys Thr Ile Ser Phe Tyr Gly
 100 105 110
 Cys Met Thr Gln Ile Ile Val Phe Leu Leu Val Gly Cys Thr Glu Cys
 115 120 125
 Ala Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Val Cys Lys
 130 135 140
 Pro Leu Tyr Tyr Ser Thr Ile Met Thr Gln Arg Val Cys Leu Trp Leu
 145 150 155 160
 Ser Phe Arg Ser Trp Ala Ser Gly Ala Leu Val Ser Leu Val Asp Thr
 165 170 175
 Ser Phe Thr Phe His Leu Pro Tyr Trp Gly Gln Asn Ile Ile Asn His
 180 185 190
 Tyr Phe Cys Glu Pro Pro Ala Leu Leu Lys Leu Ala Ser Ile Asp Thr
 195 200 205
 Tyr Ser Thr Glu Met Ala Ile Phe Ser Met Gly Val Val Ile Leu Leu
 210 215 220
 Ala Pro Val Ser Leu Ile Leu Gly Ser Tyr Trp Asn Ile Ile Ser Thr
 225 230 235 240
 Val Ile Gln Met Gln Ser Gly Glu Gly Arg Leu Lys Ala Phe Ser Thr
 245 250 255
 Cys Gly Ser His Leu Ile Val Val Val Leu Phe Tyr Gly Ser Gly Ile
 260 265 270
 Phe Thr Tyr Met Arg Pro Asn Ser Lys Thr Thr Lys Glu Leu Asp Lys
 275 280 285
 Met Ile Ser Val Phe Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Ile
 290 295 300
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Arg Lys Leu
 305 310 315 320
 Val Gly Arg Lys Cys Phe Ser His Arg Gln
 325 330

<210> 200

<211> 993

<212> DNA

<213> Homo sapiens

<400> 200

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 aaccaaacct ttgtgtccaa gtttatcttc ctgggtcttt cacaggactt gcagaccag 120
 atcctgctat ttatcctttt cctcatcatt tatctgctga ccgtgcttgg aaaccagctc 180
 atcatcattc tcatcttcct ggattctcgc cttcacactc ccatgtattt ttttcttaga 240
 aatctctcct ttgcagatct ctgtttctct actagcattg tccctcaagt gttgggtcac 300
 ttcttggtta agaggaaaac catttctttt tatgggtgta tgacacagat aattgtcttt 360
 cttctgggtg ggtgtacaga gtgtgcgctg ctggcagtga tgtcctatga ccggtatgtg 420
 gctgtctgca agcccctgta ctactctacc atcatgacac aacgggtgtg tctctggctg 480
 tccttcaggt cctgggccag tggggcacta gtgtctttag tagataccag ctttactttc 540


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catcttcctt actggggaca gaatataatc aatcactact tttgtgaacc tcctgccctc 600
ctgaagctgg cttccataga cacttacagc acagaaatgg ccatcttttc aatgggctg 660
gtaatcctcc tggcccctgt ctccctgatt cttgggttctt attggaatat tatctccact 720
gttatccaga tgcagtctgg ggaagggaga ctcaaggctt tttccacctg tggctcccat 780
cttattgttg ttgtcctctt ctatgggtca ggaatattca cctacatgcg accaaactcc 840
aagactacaa aagaactgga taaaatgata tctgtgttct atacagcggg gactccaatg 900
ttgaaccca taatttatag cttgaggaac aaagatgtca aaggggctct caggaaacta 960
gttgggagaa agtgcttctc tcataggcag tga 993

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<210> 201
 <211> 317
 <212> PRT
 <213> Homo sapiens

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<400> 201
Met Leu Arg Asn Gly Ser Ile Val Thr Glu Phe Ile Leu Val Gly Phe
  1              5              10              15

Gln Gln Ser Ser Thr Ser Thr Arg Ala Leu Leu Phe Ala Leu Phe Leu
      20              25              30

Ala Leu Tyr Ser Leu Thr Met Ala Met Asn Gly Leu Ile Ile Phe Ile
      35              40              45

Thr Ser Trp Thr Asp Pro Lys Leu Asn Ser Pro Met Tyr Phe Phe Leu
      50              55              60

Gly His Leu Ser Leu Leu Asp Val Cys Phe Ile Thr Thr Thr Ile Pro
      65              70              75              80

Gln Met Leu Ile His Leu Val Val Arg Asp His Ile Val Ser Phe Val
      85              90              95

Cys Cys Met Thr Gln Met Tyr Phe Val Phe Cys Val Gly Val Ala Glu
      100              105              110

Cys Ile Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
      115              120              125

Tyr Pro Leu Asn Tyr Val Pro Ile Ile Ser Gln Lys Val Cys Val Arg
      130              135              140

Leu Val Gly Thr Ala Trp Phe Phe Gly Leu Ile Asn Gly Ile Phe Leu
      145              150              155              160

Glu Tyr Ile Ser Phe Arg Glu Pro Phe Arg Arg Asp Asn His Ile Glu
      165              170              175

Ser Phe Phe Cys Glu Ala Pro Ile Val Ile Gly Leu Ser Cys Gly Asp
      180              185              190

Pro Gln Phe Ser Leu Trp Ala Ile Phe Ala Asp Ala Ile Val Val Ile
      195              200              205

Leu Ser Pro Met Val Leu Thr Val Thr Ser Tyr Val His Ile Leu Ala
      210              215              220

Thr Ile Leu Ser Lys Ala Ser Ser Ser Gly Arg Gly Lys Thr Phe Ser
      225              230              235              240

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Thr Cys Ala Ser His Leu Thr Val Val Ile Phe Leu Tyr Thr Ser Ala
 245 250 255

Met Phe Ser Tyr Met Asn Pro His Ser Thr His Gly Pro Asp Lys Asp
 260 265 270

Lys Pro Phe Ser Leu Leu Tyr Thr Ile Ile Thr Pro Met Cys Asn Pro
 275 280 285

Ile Ile Tyr Ser Phe Arg Asn Lys Glu Ile Lys Glu Ala Met Val Arg
 290 295 300

Ala Leu Gly Arg Thr Arg Leu Ala Gln Pro Gln Ser Val
 305 310 315

<210> 202
 <211> 954
 <212> DNA
 <213> Homo sapiens

<400> 202
 atgctaagga atggcagcat agtgacggaa tttatcctcg tgggctttca gcagagctcc 60
 acttccacac gagcattgct ctttgccctc ttcttggccc tctacagcct caccatggcc 120
 atgaatggcc tcatcatctt tatcacctcc tggacagacc ccaagctcaa cagcccatg 180
 tacttcttcc tggcccatct gtctctcctg gatgtctgct tcatcaccac taccatccca 240
 cagatgttga tccacctcgt ggtcagggac cacattgtct cctttgtatg ttgcatgacc 300
 cagatgtact ttgtcttctg tgttggtgtg gccgagtga tctcttggc ttcatggcc 360
 tatgaccgtt atgttgctat ctgctaccca cttaactatg tcccgatcat aagccagaag 420
 gtctgtgtca ggcttgtggg aactgcctgg ttctttgggc tgatcaatgg catctttctc 480
 gagtatattt cattccgaga gcccttccgc agagacaacc acatagaaag cttcttctgt 540
 gagggcccca tagtgattgg cctctcttgt ggggaccctc agtttagtct gtgggcaatc 600
 tttgccgatg ccacgtggtt aattctcagc cccatgggtg tcaactgtcac ttcttatgtg 660
 cacatcctgg ccaccatcct cagcaaagcc tctctctcag gtcgggggaa gactttctct 720
 acttgtgcct ctcacctgac tgtggctcgc tttctctaca cttcagctat gttctcttac 780
 atgaaccccc acagcacaca tgggcctgac aaagacaaac ctttctccct cctgtacacc 840
 atcattaccc ccatgtgcaa ccccatcatt tatagtttcc gcaacaagga aattaaggag 900
 gccatggtga gggcacttgg aagaaccagg ctggcccagc cacagtctgt ctag 954

<210> 203
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Lys Ile Ala Asn Asn Thr Val Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Leu Thr Gln Ser Gln Asp Ile Gln Leu Leu Val Phe Val Leu Ile Leu
 20 25 30
 Ile Phe Tyr Leu Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
 35 40 45
 Ile Arg Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Leu Phe Leu Gly
 50 55 60
 Asn Leu Ala Phe Leu Asp Ala Ser Tyr Ser Phe Ile Val Ala Pro Arg
 65 70 75 80

Met Leu Val Asp Phe Leu Ser Glu Lys Lys Val Ile Ser Tyr Arg Gly
 85 90 95
 Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Gly Gly Glu Gly
 100 105 110
 Leu Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
 115 120 125
 Pro Leu His Cys Ser Thr Val Met Asn Pro Arg Ala Cys Tyr Ala Met
 130 135 140
 Met Leu Ala Leu Trp Leu Gly Gly Phe Val His Ser Ile Ile Gln Val
 145 150 155 160
 Val Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn
 165 170 175
 Phe Phe Cys Asp Val Arg Gln Val Ile Lys Leu Ala Cys Thr Asp Met
 180 185 190
 Phe Val Val Glu Leu Leu Met Val Phe Asn Ser Gly Leu Met Thr Leu
 195 200 205
 Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys His
 210 215 220
 Val Arg Arg Ala Ala Ser Glu Gly Lys Asn Lys Ala Met Ser Thr Cys
 225 230 235 240
 Thr Thr Arg Val Ile Ile Ile Leu Leu Met Phe Gly Pro Ala Ile Phe
 245 250 255
 Ile Tyr Met Cys Pro Phe Arg Ala Leu Pro Ala Asp Lys Met Val Ser
 260 265 270
 Leu Phe His Thr Val Ile Phe Pro Leu Met Asn Pro Met Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Glu Val Lys Thr Ser Met Lys Arg Leu Leu Ser Arg
 290 295 300
 His Val Val Cys Gln Val Asp Phe Ile Ile Arg Asn
 305 310 315

<210> 204

<211> 951

<212> DNA

<213> Homo sapiens

<400> 204

atgaagatag caaacaacac agtagtgaca gaatttatcc tccttgggtct gactcagtct 60
 caagatatcc agctcttggt ctttgtgctg atcttaattt tctaccttat catcctccct 120
 ggaaattttc tcattatttt caccataagg tcagaccctg ggctcacagc cccctctat 180
 ttatttctgg gcaacttggc cttcctggat gcacccctact ccttcattgt ggctcccagg 240
 atgttgggtg acttcctctc tgagaaaaag gtaatctcct acagaggctg catcactcag 300
 ctctttttct tgcacttctt tggaggaggg gagggattac tccttgttgt gatggccttt 360
 gaccgctaca tcgcatctg ccggcctctg cactgttcaa ctgtcatgaa ccctagagcc 420
 tgctatgcaa tgatgttggc tctgtggctt ggggggtttt tccactccat tatccaggtg 480
 gtctctatcc tccgcttgcc tttttgtggc ccaaaccagc tggacaactt cttctgtgat 540

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gtccgacagg tcatcaagct ggcttgcacc gacatgtttg tgggtggagct tctaattggtc 600
ttcaacagtg gcctgatgac actcctgtgc tttctggggc ttctggcttc ctatgcagtc 660
atcctctgcc atgttcgtag ggcagcttct gaagggaaga acaaggccat gtccacgtgc 720
accactcgtg tcattattat acttcttatg tttggacctg ctatcttcat ctacatgtgc 780
cctttcaggg ccttaccagc tgacaagatg gtttctctct ttcacacagt gatctttcca 840
ttgatgaatc ctatgattta tacccttcgc aaccaggaag tgaaaacttc catgaagagg 900
ttattgagtc gacatgtagt ctgtcaagtg gattttataa taagaaactg a 951

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<210> 205

<211> 338

<212> PRT

<213> Homo sapiens

<400> 205

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Met Cys Tyr Ile Tyr Leu Ile Phe Lys Glu Trp Thr Leu Ile Phe Tyr
 1             5             10             15

Phe Ser Leu Leu Leu Phe Leu Gln Ile Thr Pro Ala Ile Met Ala Asn
      20             25             30

Leu Thr Ile Val Thr Glu Phe Ile Leu Met Gly Phe Ser Thr Asn Lys
      35             40             45

Asn Met Cys Ile Leu His Ser Ile Leu Phe Leu Leu Ile Tyr Leu Cys
      50             55             60

Ala Leu Met Gly Asn Val Leu Ile Ile Met Ile Thr Thr Leu Asp His
      65             70             75             80

His Leu His Thr Pro Val Tyr Phe Phe Leu Lys Asn Leu Ser Phe Leu
      85             90             95

Asp Leu Cys Leu Ile Ser Val Thr Ala Pro Lys Ser Ile Ala Asn Ser
      100            105            110

Leu Ile His Asn Asn Ser Ile Ser Phe Leu Gly Cys Val Ser Gln Val
      115            120            125

Phe Leu Leu Leu Ser Ser Ala Ser Ala Glu Leu Leu Leu Leu Thr Val
      130            135            140

Met Ser Phe Asp Arg Tyr Thr Ala Ile Cys His Pro Leu His Tyr Asp
      145            150            155            160

Val Ile Met Asp Arg Ser Thr Cys Val Gln Arg Ala Thr Val Ser Trp
      165            170            175

Leu Tyr Gly Gly Leu Ile Ala Val Met His Thr Ala Gly Thr Phe Ser
      180            185            190

Leu Ser Tyr Cys Gly Ser Asn Met Val His Gln Phe Phe Cys Asp Ile
      195            200            205

Pro Gln Leu Leu Ala Ile Ser Cys Ser Glu Asn Leu Ile Arg Glu Ile
      210            215            220

Ala Leu Ile Leu Ile Asn Val Val Leu Asp Phe Cys Cys Phe Ile Val
      225            230            235            240

Ile Ile Ile Thr Tyr Val His Val Phe Ser Thr Val Lys Lys Ile Pro

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245 250 255
 Ser Thr Glu Gly Gln Ser Lys Ala Tyr Ser Ile Cys Leu Pro His Leu
 260 265 270
 Leu Val Val Leu Phe Leu Ser Thr Gly Phe Ile Ala Tyr Leu Lys Pro
 275 280 285
 Ala Ser Glu Ser Pro Ser Ile Leu Asp Ala Val Ile Ser Val Phe Tyr
 290 295 300
 Thr Met Leu Pro Pro Thr Phe Asn Pro Ile Ile Tyr Ser Leu Arg Asn
 305 310 315 320
 Lys Ala Ile Lys Val Ala Leu Gly Met Leu Ile Lys Gly Lys Leu Thr
 325 330 335
 Lys Lys

<210> 206
 <211> 1017
 <212> DNA
 <213> Homo sapiens

<400> 206
 atgtgttata tatatttaaat atttaaagag tggacattga tattttactt cagtcttctc 60
 cttttcctgc agattactcc tgcaataatg gcaaatctca caatcgtgac tgaatttatc 120
 cttatggggt tttctaccaa taaaaaatatg tgcattttgc attcgattct cttcttggtg 180
 atttatttgt gtgccctgat ggggaatgtc ctcattatca tgatcacaac tttggaccat 240
 catctccaca ccccggtgta tttcttcttg aagaatctat ctttcttgga tctctgcctt 300
 atttcagtcg cggtcctcaa atctatcgcc aattctttga tacacaacaa ctccatttca 360
 ttccttggtc gtgtttccca ggtctttttg ttgctttctt cagcatctgc agagctgctc 420
 ctctcacggg tgatgtcctt tgaccgctat actgctatat gtcacctctc gcactatgat 480
 gtcacatggt acaggagcac ctgtgtccaa agagccactg tgtcttggtc gtatgggggt 540
 ctgattgctg tgatgcacac agctggcacc ttctccttat cctactgtgg gtccaacatg 600
 gtccatcagt tcttctgtga cattccccag ttattagcta tttcttgctc agaaaattta 660
 ataagagaaa ttgcactcat ccttattaat gtagtttttg atttctgctg ttttattgtc 720
 atcatcatta cctatgtcca cgtcttctct acagtcaaga agatcccttc cacagaaggc 780
 cagtcaaaaag cctactctat ttgccttcca cacttgctgg ttgtgttatt tctttccact 840
 ggattcattg cttatctgaa gccagcttca gagtctcctt ctattttgga tgctgtaatt 900
 tctgtgttct acactatgct gcccccaacc tttaatccca ttatatacag tttgagaaac 960
 aaggccataa aggtggctct ggggatgttg ataaagggaa agctcaccaa aaagtaa 1017

<210> 207
 <211> 342
 <212> PRT
 <213> Homo sapiens

<400> 207
 Met Lys Phe Trp His Gly Phe Ser Ser His Leu Asn Pro Met Phe Ser
 1 5 10 15
 Ser Phe Leu Leu Tyr Leu Ser Leu Pro Trp Ile Asn Thr Thr Ile Gln
 20 25 30
 Ala Trp Leu Asn Leu Cys Ser Leu Ala Leu Pro Val Trp Ala Met Ser
 35 40 45

Gly Ala Gly Phe Leu Ser Cys Cys Tyr Trp His Thr Cys Ser Pro Ser
 50 55 60
 Val Val Thr Cys Ser Ser Ser Gln Ser Ser Asp Trp Met Gln Leu Cys
 65 70 75 80
 Thr His Leu Cys Thr Thr Leu Ser Val Phe Phe Pro Ser Trp Ser Cys
 85 90 95
 Gly Ile Gln Leu Pro Leu Ser Leu Arg Cys Cys Leu Ile Phe Ser Val
 100 105 110
 Arg Arg Lys Pro Phe Leu Leu Gln Asp Ala Ser Phe Arg Pro Thr Ser
 115 120 125
 Ser Thr Pro Trp Gly Ala Cys Glu Cys Tyr Leu Leu Thr Ala Met Ala
 130 135 140
 Tyr Asp Arg Tyr Leu Ala Ile Cys Arg Pro Leu His Tyr Pro Ile Ile
 145 150 155 160
 Met Thr Thr Thr Leu Cys Ala Lys Met Ala Ala Ala Cys Trp Thr Cys
 165 170 175
 Gly Phe Leu Cys Pro Ile Ser Glu Val Ile Leu Ala Ser Gln Leu Pro
 180 185 190
 Phe Cys Ala Tyr Asn Glu Ile Gln His Ile Phe Cys Asp Phe Pro Pro
 195 200 205
 Leu Leu Ser Leu Ala Cys Lys Asp Thr Ser Ala Asn Ile Leu Val Asp
 210 215 220
 Phe Ala Ile Asn Ala Phe Ile Ile Leu Ile Thr Phe Phe Phe Ile Met
 225 230 235 240
 Ile Ser Tyr Ala Arg Ile Ile Gly Ala Val Leu Lys Ile Lys Thr Ala
 245 250 255
 Ser Gly Arg Lys Lys Ala Phe Ser Thr Cys Ala Ser His Leu Ala Val
 260 265 270
 Val Leu Ile Phe Phe Gly Ser Ile Ile Phe Met Tyr Val Arg Leu Lys
 275 280 285
 Lys Ser Tyr Ser Leu Thr Leu Asp Arg Thr Leu Ala Ile Val Tyr Ser
 290 295 300
 Val Leu Thr Pro Met Val Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys
 305 310 315 320
 Glu Ile Ile Lys Ala Ile Lys Arg Thr Ile Phe Gln Lys Gly Asp Lys
 325 330 335
 Ala Ser Leu Ala His Leu
 340

<210> 208
 <211> 1053
 <212> DNA

<213> Homo sapiens

<400> 208

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atgtgtcaac aaatcttacg ggattgcatt cttctcatatc atcatttgtg cattaacagg 60
aaaaaagtct cacttgtgat gctgggtcca gcttataacc acacaatgga aaccctgcc 120
tccttcctcc ttgtgggtat cccaggactg caatcttcac atctttggct ggctatctca 180
ctgagtgcc tgtacatcat agccctgtta ggaaacacca tcatcgtgac tgcaatctgg 240
atggattcca ctcggcata gcccattgat tgctttctgt gtgttctggc tgctgtggac 300
attgttatgg cctcctcggt ggtacccaag atggtgagca tcttctgctc aggagacagc 360
tcaatcagct ttagtgcttg tttcactcag atgttttttg tccacttagc cacagctgtg 420
gagacggggc tgctgctgac catggctttt gaccgctatg tagccatctg caagcctcta 480
cactacaaga gaattctcac gcctcaagtg atgctgggaa tgagtatggc catcaccatc 540
agagctatca tagccataac tccactgagt tggatgggtga gtcactacc tttctgtggc 600
tccaatgtgg ttgtccactc ctactgtgag cacatagctt tggccagggt agcatgtgct 660
gaccccgctg ccagcagctc ctacagtctg attgggttct ctcttatggg gggctctgat 720
gtggccttca ttgtgcctc ctatatctta attctcaagg cagtatttgg tctctcctca 780
aagactgctc agttgaaagc attaagcaca tgtggctccc atgtgggggt tatggctttg 840
tactatctac ctgggatggc atccatctat gcggcctggg tggggcagga tgtagtggc 900
ttgcacaccc aagtctgtc agctgacctg tacgtgatca tcccagccac cttaaattccc 960
atcatctatg gcatgaggac caaacaactg cgggagagaa tatggagtta tctgatgcat 1020
gtcctctttg accattccaa cctgggttca tga 1053
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<210> 209

<211> 309

<212> PRT

<213> Homo sapiens

<400> 209

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Met Glu Arg Ile Asn His Thr Ser Ser Val Ser Glu Phe Ile Leu Leu
  1             5             10             15

Gly Leu Ser Ser Arg Pro Glu Asp Gln Lys Thr Leu Phe Val Leu Phe
          20             25             30

Leu Ile Val Tyr Leu Val Thr Ile Thr Gly Asn Leu Leu Ile Ile Leu
          35             40             45

Ala Ile Arg Phe Asn Pro His Leu Gln Thr Pro Met Tyr Phe Phe Leu
          50             55             60

Ser Phe Leu Ser Leu Thr Asp Ile Cys Phe Thr Thr Ser Val Val Pro
          65             70             75             80

Lys Met Leu Met Asn Phe Leu Ser Glu Lys Lys Thr Ile Ser Tyr Ala
          85             90             95

Gly Cys Leu Thr Gln Met Tyr Phe Leu Tyr Ala Leu Gly Asn Ser Asp
          100            105            110

Ser Cys Leu Leu Ala Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys
          115            120            125

Asp Pro Phe His Tyr Val Thr Thr Met Ser His His His Cys Val Leu
          130            135            140

Leu Val Ala Phe Ser Cys Ser Phe Pro His Leu His Ser Leu Leu His
          145            150            155            160

Thr Leu Leu Leu Asn Arg Leu Thr Phe Cys Asp Ser Asn Val Ile His
          165            170            175
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Lys Pro Gly Arg Val Asn Gln Thr Thr Val Ser Asp Phe Leu Leu Leu
 20 25 30
 Gly Leu Ser Glu Trp Pro Glu Glu Gln Pro Leu Leu Phe Gly Ile Phe
 35 40 45
 Leu Gly Met Tyr Leu Val Thr Met Val Gly Asn Leu Leu Ile Ile Leu
 50 55 60
 Ala Ile Ser Ser Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu
 65 70 75 80
 Ala Asn Leu Ser Leu Thr Asp Ala Cys Phe Thr Ser Ala Ser Ile Pro
 85 90 95
 Lys Met Leu Ala Asn Ile His Thr Gln Ser Gln Ile Ile Ser Tyr Ser
 100 105 110
 Gly Cys Leu Ala Gln Leu Tyr Phe Leu Leu Met Phe Gly Gly Leu Asp
 115 120 125
 Asn Cys Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 130 135 140
 Gln Pro Leu His Tyr Ser Thr Ser Met Ser Pro Gln Leu Cys Ala Leu
 145 150 155 160
 Met Leu Gly Val Cys Trp Val Leu Thr Asn Cys Pro Ala Leu Met His
 165 170 175
 Thr Leu Leu Leu Thr Arg Val Ala Phe Cys Ala Gln Lys Ala Ile Pro
 180 185 190
 His Phe Tyr Cys Asp Pro Ser Ala Leu Leu Lys Leu Ala Cys Ser Asp
 195 200 205
 Thr His Val Asn Glu Leu Met Ile Ile Thr Met Gly Leu Leu Phe Leu
 210 215 220
 Thr Val Pro Leu Leu Leu Ile Val Phe Ser Tyr Val Arg Ile Phe Trp
 225 230 235 240
 Ala Val Phe Val Ile Ser Ser Pro Gly Gly Arg Trp Lys Ala Phe Ser
 245 250 255
 Thr Cys Gly Ser His Leu Thr Val Val Leu Leu Phe Tyr Gly Ser Leu
 260 265 270
 Met Gly Val Tyr Leu Leu Pro Pro Ser Thr Tyr Ser Thr Glu Arg Glu
 275 280 285
 Ser Arg Ala Ala Val Leu Tyr Met Val Ile Ile Pro Thr Leu Asn Pro
 290 295 300
 Phe Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu Gly Lys
 305 310 315 320
 Leu Phe Val Ser Gly Lys Thr Phe Phe Leu
 325 330

<210> 212
<211> 993
<212> DNA
<213> Homo sapiens

<400> 212
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gtgaacaaaa ccactgtttc agacttcctc cttctaggac tctctgagtg gccagaggag 120
cagcctcttc tgtttggcat cttccttggc atgtacctgg tcaccatggg ggggaacctg 180
ctcattatcc tggccatcag ctctgacca cacctccata ctcccatgta cttctttctg 240
gccaacctgt cattaactga tgcctgtttc acttctgcct ccatcccca aatgctggcc 300
aacattcata cccagagtca gatcatctcg tattctgggt gtcttgaca gctatatttc 360
ctccttatgt ttggtggcct tgacaactgc ctgctggctg tgatggcata tgaccgctat 420
gtggccatct gcccaaccact ccattacagc acatctatga gtcccagct ctgtgcacta 480
atgctgggtg tgtgctgggt gctaaccaac tgtcctgccc tgatgcacac actggtgctg 540
accgcgtgg ctttctgtgc ccagaaagcc atccctcatt tctattgtga tcctagtgtc 600
ctcctgaagc ttgctgtctc agatacccat gtaaaccgagc tgatgatcat caccatgggc 660
ttgctgttcc tcaactgttc cctcctgctg atcgtcttct cctatgtccg cattttctgg 720
gctgtgtttg tcatctcatc tcctggaggg agatgggaagg ccttctctac ctgtggttct 780
catctcacgg tggttctgct cttctatggg tctcttatgg gtgtgtattt acttcctcca 840
tcaacttact ctacagagag ggaaagtagg gctgctgttc tctatatggg gattattccc 900
acgctaaacc cattcattta tagcttgagg aacagagaca tgaaggaggc tttgggtaaa 960
ctttttgtca gtggaaaaac attcttttta tga 993

<210> 213
<211> 312
<212> PRT
<213> Homo sapiens

<400> 213
Met Asp Glu Ala Asn His Ser Val Val Ser Glu Phe Val Phe Leu Gly
1 5 10 15
Leu Ser Asp Ser Arg Lys Ile Gln Leu Leu Leu Phe Leu Phe Phe Ser
20 25 30
Val Phe Tyr Val Ser Ser Leu Met Gly Asn Leu Leu Ile Val Leu Thr
35 40 45
Val Thr Ser Asp Pro Arg Leu Gln Ser Pro Met Tyr Phe Leu Leu Ala
50 55 60
Asn Leu Ser Ile Ile Asn Leu Val Phe Cys Ser Ser Thr Ala Pro Lys
65 70 75 80
Met Ile Tyr Asp Leu Phe Arg Lys His Lys Thr Ile Ser Phe Gly Gly
85 90 95
Cys Val Val Gln Ile Phe Phe Ile His Ala Val Gly Gly Thr Glu Met
100 105 110
Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
115 120 125
Pro Leu His Tyr Leu Thr Ile Met Asn Pro Gln Arg Cys Ile Leu Phe
130 135 140
Leu Val Ile Ser Trp Ile Ile Gly Ile Ile His Ser Val Ile Gln Leu
145 150 155 160

Ala Phe Val Val Asp Leu Leu Phe Cys Gly Pro Asn Glu Leu Asp Ser
165 170 175

Phe Phe Cys Asp Leu Pro Arg Phe Ile Lys Leu Ala Cys Ile Glu Thr
180 185 190

Tyr Thr Leu Gly Phe Met Val Thr Ala Asn Ser Gly Phe Ile Ser Leu
195 200 205

Ala Ser Phe Leu Ile Leu Ile Ile Ser Tyr Ile Phe Ile Leu Val Thr
210 215 220

Val Gln Lys Lys Ser Ser Gly Gly Ile Phe Lys Ala Phe Ser Met Leu
225 230 235 240

Ser Ala His Val Ile Val Val Val Leu Val Phe Gly Pro Leu Ile Phe
245 250 255

Phe Tyr Ile Phe Pro Phe Pro Thr Ser His Leu Asp Lys Phe Leu Ala
260 265 270

Ile Phe Asp Ala Val Ile Thr Pro Val Leu Asn Pro Val Ile Tyr Thr
275 280 285

Phe Arg Asn Lys Glu Met Met Val Ala Met Arg Arg Arg Cys Ser Gln
290 295 300

Phe Val Asn Tyr Ser Lys Ile Phe
305 310

<210> 214
<211> 939
<212> DNA
<213> Homo sapiens

<400> 214
atggatgaag ccaatcactc tgtggtctct gagtttgtgt tcttgggact ctctgactcg 60
cggaagatcc agctcctcct ctctcctctt ttctcagtgt tctatgtatc aagcctgatg 120
ggaaatctcc tcattgtgct aactgtgacc tctgaccctc gtttacagtc ccccatgtac 180
ttcctgctgg ccaacctttc catcatcaat ttggtatttt gttcctccac agctcccaag 240
atgatttatg accttttcag gaagcacaag accatctctt ttgggggctg tgtagttcag 300
atcttcttta tccatgcagt tgggggaact gagatgggtgc tgctcatagc catggctttt 360
gaccgatatg tggccatatg taagcctctc cactacctga ccatcatgaa cccacaaagg 420
tgcattttgt ttttagtcat ttcttggtat ataggtatta ttactcagt gattcagttg 480
gcttttggtg tagacctgct gttctgtggc cctaataaat tagatagttt cttttgtgat 540
cttcctcgat ttatcaaact ggcttgcata gagacctaca cattgggatt catggttact 600
gccaatagtg gatttatttc tctggcttct tttttaattc tcataatctc ttacatcttt 660
attttggtga ctggttcagaa aaaatcttca ggtggtatat tcaaggcttt ctctatgctg 720
tcagctcatg tcattgtggt ggttttggtc tttgggccat taatcttttt ctatatcttt 780
ccatttccca catcacatct tgataaattc cttgccatct ttgatgcagt taccactccc 840
gttttgaatc cagtcattcta tactttttaga aataaagaga tgatggtggc aatgagaaga 900
cgatgctctc agtttgtgaa ttacagtaaa atcttttaa 939

<210> 215
<211> 357
<212> PRT
<213> Homo sapiens

<400> 215

Met	Asn	Asn	Thr	Ile	Val	Phe	Val	Ile	Lys	Ile	Gln	Ile	Glu	Lys	Ser	
1				5					10					15		
Asp	Leu	Lys	Tyr	Arg	Ala	Ile	Ser	Leu	Gln	Glu	Ile	Ser	Lys	Ile	Ser	
			20					25					30			
Leu	Leu	Phe	Trp	Val	Leu	Leu	Leu	Val	Ile	Ser	Arg	Leu	Leu	Leu	Ala	
		35						40					45			
Met	Thr	Leu	Gly	Asn	Ser	Thr	Glu	Val	Thr	Glu	Phe	Tyr	Leu	Leu	Gly	
	50					55					60					
Phe	Gly	Ala	Gln	His	Glu	Phe	Trp	Cys	Ile	Leu	Phe	Ile	Val	Phe	Leu	
65					70					75					80	
Leu	Ile	Tyr	Val	Thr	Ser	Ile	Met	Gly	Asn	Ser	Gly	Ile	Ile	Leu	Leu	
				85					90					95		
Ile	Asn	Thr	Asp	Ser	Arg	Phe	Gln	Thr	Leu	Thr	Tyr	Phe	Phe	Leu	Gln	
			100					105					110			
His	Leu	Ala	Phe	Val	Asp	Ile	Cys	Tyr	Thr	Ser	Ala	Ile	Thr	Pro	Lys	
		115					120						125			
Met	Leu	Gln	Ser	Phe	Thr	Glu	Glu	Lys	Asn	Leu	Ile	Leu	Phe	Gln	Gly	
	130					135					140					
Cys	Val	Ile	Gln	Phe	Leu	Val	Tyr	Ala	Thr	Phe	Ala	Thr	Ser	Asp	Cys	
145					150					155					160	
Tyr	Leu	Leu	Ala	Met	Met	Ala	Val	Asp	Pro	Tyr	Val	Ala	Ile	Cys	Lys	
				165					170					175		
Pro	Leu	His	Tyr	Thr	Val	Ile	Met	Ser	Arg	Thr	Val	Cys	Ile	Arg	Leu	
		180						185					190			
Val	Ala	Gly	Ser	Tyr	Ile	Met	Gly	Ser	Ile	Asn	Ala	Ser	Val	Gln	Thr	
		195					200						205			
Gly	Phe	Thr	Cys	Ser	Leu	Ser	Phe	Cys	Lys	Ser	Asn	Ser	Ile	Asn	His	
	210					215					220					
Phe	Phe	Cys	Asp	Val	Pro	Pro	Ile	Leu	Ala	Leu	Ser	Cys	Ser	Asn	Val	
225					230					235					240	
Asp	Ile	Asn	Ile	Met	Leu	Leu	Val	Val	Phe	Val	Gly	Ser	Asn	Leu	Ile	
				245					250					255		
Phe	Thr	Gly	Leu	Val	Val	Ile	Phe	Ser	Tyr	Ile	Tyr	Ile	Met	Ala	Thr	
		260						265					270			
Ile	Leu	Lys	Met	Ser	Ser	Ser	Ala	Gly	Arg	Lys	Lys	Ser	Phe	Ser	Thr	
		275					280						285			
Cys	Ala	Ser	His	Leu	Thr	Ala	Val	Thr	Ile	Phe	Tyr	Gly	Thr	Leu	Ser	
	290					295					300					
Tyr	Met	Tyr	Leu	Gln	Ser	His	Ser	Asn	Asn	Ser	Gln	Glu	Asn	Met	Lys	
305					310					315					320	

Val Ala Phe Ile Phe Tyr Gly Thr Val Ile Pro Met Leu Asn Pro Leu
 325 330 335

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Leu Lys Val Ile
 340 345 350

Gly Lys Lys Leu Phe
 355

<210> 216
 <211> 1074
 <212> DNA
 <213> Homo sapiens

<400> 216
 atgaataaca ctattgtatt tgtcataaaa atacaaatag aaaaaagtga cttgaaatat 60
 agagccattt cattgcaaga aatctcaaag atttcccttc ttttctgggt ccttctcttg 120
 gtcatttcta gacttttact agccatgaca ctaggaaaca gcactgaagt cactgaattc 180
 tatcttctgg gatttggtgc ccagcatgag ttttggtgta tcctcttcat tgtattcctt 240
 ctcacatcatg tgacctccat aatgggtaat agtggataa tcttactcat caacacagat 300
 tccagatttc aaacactcac gtactttttt ctacaacatt tggcttttgt tgatatctgt 360
 tacacttctg ctatcactcc caagatgctc caaagcttca cagaagaaaa gaatttgata 420
 ttatttcagg gctgtgtgat acaattctta gtttatgcaa catttgcaac cagtgactgt 480
 tatctcctgg ctatgatggc agtggatcct tatgttgcca tctgtaagcc ccttcactat 540
 actgtaatca tgtcccgaac agtctgcac cgtttggtag ctgggttcata catcatgggc 600
 tcaataaatg cctctgtaca aacagggttt acatgttcac tgtccttctg caagtccaat 660
 agcatcaatc actttttctg tgatgttccc cctattcttg ctctttcatg ctccaatgtt 720
 gacatcaaca tcatgtact tgttgtcttt gtgggatcta acttgatatt cactggggtg 780
 gtcgtcatct tttcctacat ctacatcatg gccaccatcc tgaaaatgtc ttctagtga 840
 ggaaggaaaa aatccttctc aacatgtgct tcccacctga ccgcagtcac cattttctat 900
 gggacactct cttacatgta tttgcagtct cattctaata attcccagga aaatatgaaa 960
 gtggccttta tattttatgg cacagttatt cccatgttaa atcctttaat ctatagcttg 1020
 agaaataagg aagtaaaaga agctttaaaa gtgataggga aaaagttatt ttaa 1074

<210> 217
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 217
 Met Asn His Met Ser Ala Ser Leu Lys Ile Ser Asn Ser Ser Lys Phe
 1 5 10 15

Gln Val Ser Glu Phe Ile Leu Leu Gly Phe Pro Gly Ile His Ser Trp
 20 25 30

Gln His Trp Leu Ser Leu Pro Leu Ala Leu Leu Tyr Leu Ser Ala Leu
 35 40 45

Ala Ala Asn Thr Leu Ile Leu Ile Ile Ile Trp Gln Asn Pro Ser Leu
 50 55 60

Gln Gln Pro Met Tyr Ile Phe Leu Gly Ile Leu Cys Met Val Asp Met
 65 70 75 80

Gly Leu Ala Thr Thr Ile Ile Pro Lys Ile Leu Ala Ile Phe Trp Phe
 85 90 95

Asp Ala Lys Val Ile Ser Leu Pro Glu Cys Phe Ala Gln Ile Tyr Ala

100	105	110
Ile His Phe Phe Val Gly Met Glu Ser Gly Ile Leu Leu Cys Met Ala		
115	120	125
Phe Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg Tyr Pro Ser Ile		
130	135	140
Val Thr Ser Ser Leu Ile Leu Lys Ala Thr Leu Phe Met Val Leu Arg		
145	150	155
Asn Gly Leu Phe Val Thr Pro Val Pro Val Leu Ala Ala Gln Arg Asp		
165	170	175
Tyr Cys Ser Lys Asn Glu Ile Glu His Cys Leu Cys Ser Asn Leu Gly		
180	185	190
Val Thr Ser Leu Ala Cys Asp Asp Arg Arg Pro Asn Ser Ile Cys Gln		
195	200	205
Leu Val Leu Ala Trp Leu Gly Met Gly Ser Asp Leu Ser Leu Ile Ile		
210	215	220
Leu Ser Tyr Ile Leu Ile Leu Tyr Ser Val Leu Arg Leu Asn Ser Ala		
225	230	235
Glu Ala Ala Ala Lys Ala Leu Ser Thr Cys Ser Ser His Leu Thr Leu		
245	250	255
Ile Leu Phe Phe Tyr Thr Ile Val Val Val Ile Ser Val Thr His Leu		
260	265	270
Thr Glu Met Lys Ala Thr Leu Ile Pro Val Leu Leu Asn Val Leu His		
275	280	285
Asn Ile Ile Pro Pro Ser Leu Asn Pro Thr Val Tyr Ala Leu Gln Thr		
290	295	300
Lys Glu Leu Arg Ala Ala Phe Gln Lys Val Leu Phe Ala Leu Thr Lys		
305	310	315
Glu Ile Arg Ser		

<210> 218
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 218
 atgaatcata tgtctgcac tctcaaaatc tccaatagct ccaaattcca ggtctctgag 60
 ttcatacctgc tgggattccc gggcattcac agctggcaac actggctatc tctgcccctg 120
 gcactactgt atctctcagc acttgctgca aacaccctca tctcatcat catctggcag 180
 aacccttctt tacagcagcc catgtatatt ttccttggca tctctgtat ggtagacatg 240
 ggtctggcca ctactatcat ccctaagatc ctggccatct tctggtttga tgccaagggt 300
 attagcctcc ctgagtgett tgetcagatt tatgccattc acttctttgt gggcatggag 360
 tctggtatcc tactctgcac ggcttttgat agatatgtgg ctatttgtca ccctcttcgc 420
 tatccatcaa ttgtcaccag ttccttaatc ttaaaagcta ccctgttcat ggtgctgaga 480
 aatggcttat ttgtcactcc agtgccctgtg cttgcagcac agcgtgatta ttgctccaag 540
 aatgaaattg aacactgcct gtgctctaac cttgggggtca caagcctggc ttgtgatgac 600

aggaggccaa acagcatttg ccagttgggtt ctggcatggc ttggaatggg gagtgatcta 660
 agtcttatta tactgtcata tatttttgatt ctgtactctg tacttagact gaactcagct 720
 gaagctgcag ccaaggccct gagcacttgt agttcacatc tcaccctcat ccttttcttt 780
 tacactattg ttgtagtgat ttcagtgact catctgacag agatgaaggc tactttgatt 840
 ccagttctac ttaatgtgtt gcacaacatc atccccctt ccctcaacc tacagtttat 900
 gcacttcaga ccaaagaact tagggcagcc ttccaaaagg tgctgtttgc ccttacaaaa 960
 gaaataagat cttag 975

<210> 219
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 219
 Met Pro Leu Phe Asn Ser Leu Cys Trp Phe Pro Thr Ile His Val Thr
 1 5 10 15
 Pro Pro Ser Phe Ile Leu Asn Gly Ile Pro Gly Leu Glu Arg Val His
 20 25 30
 Val Trp Ile Ser Leu Pro Leu Cys Thr Met Tyr Ile Ile Phe Leu Val
 35 40 45
 Gly Asn Leu Gly Leu Val Tyr Leu Ile Tyr Tyr Glu Glu Ser Leu His
 50 55 60
 His Pro Met Tyr Phe Phe Phe Gly His Ala Leu Ser Leu Ile Asp Leu
 65 70 75 80
 Leu Thr Cys Thr Thr Thr Leu Pro Asn Ala Leu Cys Ile Phe Trp Phe
 85 90 95
 Ser Leu Lys Glu Ile Asn Phe Asn Ala Cys Leu Ala Gln Met Phe Phe
 100 105 110
 Val His Gly Phe Thr Gly Val Glu Ser Gly Val Leu Met Leu Met Ala
 115 120 125
 Leu Asp Arg Tyr Ile Ala Ile Cys Tyr Pro Leu Arg Tyr Ala Thr Thr
 130 135 140
 Leu Thr Asn Pro Ile Ile Ala Lys Ala Glu Leu Ala Thr Phe Leu Arg
 145 150 155 160
 Gly Val Leu Leu Met Ile Pro Phe Pro Phe Leu Val Lys Arg Leu Pro
 165 170 175
 Phe Cys Gln Ser Asn Ile Ile Ser His Thr Tyr Cys Asp His Met Ser
 180 185 190
 Val Val Lys Leu Ser Cys Ala Ser Ile Lys Val Asn Val Ile Tyr Gly
 195 200 205
 Leu Met Val Ala Leu Leu Ile Gly Val Phe Asp Ile Cys Cys Ile Ser
 210 215 220
 Leu Ser Tyr Thr Leu Ile Leu Lys Ala Ala Ile Ser Leu Ser Ser Ser
 225 230 235 240
 Asp Ala Arg Gln Lys Ala Phe Ser Thr Cys Thr Ala His Ile Ser Ala

245

250

255

Ile Ile Ile Thr Tyr Val Pro Ala Phe Phe Thr Phe Phe Ala His Arg
260 265 270

Phe Gly Gly His Thr Ile Pro Pro Ser Leu His Ile Ile Val Ala Asn
275 280 285

Leu Tyr Leu Leu Leu Pro Pro Thr Leu Asn Pro Ile Val Tyr Gly Val
290 295 300

Lys Thr Lys Gln Ile Arg Lys Ser Val Ile Lys Phe Phe Gln Gly Asp
305 310 315 320

Lys Gly Ala Gly

<210> 220

<211> 975

<212> DNA

<213> Homo sapiens

<400> 220

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acaatgtaca tcatcttctt tgtggggaat cttgggtctg tgtacctcat ttattatgag 180
gagtccttac atcatccgat gtattttttt tttggccatg ctctctccct cattgacctc 240
cttacctgca ccaccactct acccaatgca ctctgcatct tctggttcag tctcaaagaa 300
attaacttca atgcttgctt ggcccagatg ttctttgttc atgggttcac aggtgtggag 360
tctgggggtg tcatgtctat ggctctagac cgctatatag ccatttgcta ccctttgcgt 420
tatgctacca cactcaccaa ccctatcatt gccaaaggctg agcttgccac cttcctgagg 480
gggtgattgc tgatgattcc tttcccattc ttgggttaagc gtttgccctt ctgccaaagc 540
aatattatct ccatacgta ctgcgaccac atgtctgtag taaagctatc ttgtgccagc 600
atcaaggcca atgtaatcta tgggtctaag gttgctctcc tgattggagt gtttgacatt 660
tggtgtatat ctttgtctta cactttgatc ctcaaggcag cgatcagcct ctcttcatca 720
gatgctcggc agaaggcttt cagcacctgc actgcccata tatctgccat catcatcacc 780
tatgttccag cattcttcac tttctttgcc caccgttttg ggggacacac aattccccct 840
tctcttcaca tcattgtggc taatctttat cttcttcttc cccaactct aaacctatt 900
gtttatggag taaagacaaa acagatacgc aagagtgtca taaagttctt ccagggtgat 960
aagggtgcag gttga 975

<210> 221

<211> 317

<212> PRT

<213> Homo sapiens

<400> 221

Met Gln Pro Tyr Thr Lys Asn Trp Thr Gln Val Thr Glu Phe Val Met
1 5 10 15

Met Gly Phe Ala Gly Ile His Glu Ala His Leu Leu Phe Phe Ile Leu
20 25 30

Phe Leu Thr Met Tyr Leu Phe Thr Leu Val Glu Asn Leu Ala Ile Ile
35 40 45

Leu Val Val Gly Leu Asp His Arg Leu Arg Arg Pro Met Tyr Phe Phe
50 55 60

Leu Thr His Leu Ser Cys Leu Glu Ile Trp Tyr Thr Ser Val Thr Val
 65 70 75 80
 Pro Lys Met Leu Ala Gly Phe Ile Gly Val Asp Gly Gly Lys Asn Ile
 85 90 95
 Ser Tyr Ala Gly Cys Leu Ser Gln Leu Phe Ile Phe Thr Phe Leu Gly
 100 105 110
 Ala Thr Glu Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val
 115 120 125
 Ala Ile Cys Met Pro Leu His Tyr Gly Ala Phe Val Ser Trp Gly Thr
 130 135 140
 Cys Ile Arg Leu Ala Ala Ala Cys Trp Leu Val Gly Phe Leu Thr Pro
 145 150 155 160
 Ile Leu Pro Ile Tyr Leu Leu Ser Gln Leu Thr Phe Cys Gly Pro Asn
 165 170 175
 Val Ile Asp His Phe Ser Cys Asp Ala Ser Pro Leu Leu Ala Leu Ser
 180 185 190
 Cys Ser Asp Val Thr Trp Lys Glu Thr Val Asp Phe Leu Val Ser Leu
 195 200 205
 Ala Val Leu Leu Ala Ser Ser Met Val Ile Ala Val Ser Tyr Gly Asn
 210 215 220
 Ile Val Trp Thr Leu Leu His Ile Arg Ser Ala Ala Glu Arg Trp Lys
 225 230 235 240
 Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ser Leu Phe Tyr
 245 250 255
 Gly Thr Leu Phe Phe Met Tyr Val Gln Thr Lys Val Thr Ser Ser Ile
 260 265 270
 Asn Phe Asn Lys Val Val Ser Val Phe Tyr Ser Val Val Thr Pro Met
 275 280 285
 Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Gly Ala
 290 295 300
 Leu Gly Arg Val Phe Ser Leu Asn Phe Trp Lys Gly Gln
 305 310 315

<210> 222

<211> 954

<212> DNA

<213> Homo sapiens

<400> 222

atgcaaccat ataccaaaaa ctggaccag gtaactgaat ttgtcatgat gggctttgct 60
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 ttggtggaga atttggccat catttttagtg gtgggtttgg accaccgact acggagaccc 180
 atgtatttct tccctgacaca cttgtcctgc cttgaaatct ggtacacttc tgttacagtg 240
 cccaagatgc tggctgggtt tattggggtg gatgggtggca agaatatctc ttatgctggt 300
 tgcctatccc agctcttcat cttcaccttt cttggggcaa ctgagtgttt cctactggct 360

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gccatggcct atgatcggtta tgtggccatt tgtatgcctc tccactatgg ggcttttgtg 420
tcttggggca cctgcatccg tctggcagct gcctgttggc tggtaggttt cctcacaccc 480
atcttgccaa tctacctctt gtctcagcta acattttgtg gcccaaagt cattgaccat 540
ttctcctgtg atgcctcacc cttgctagcc ttgtcgtgct cagatgtcac ttggaaggag 600
actgtggatt tcttgggtgc tctggctgtg ctactggcct cctctatggt cattgctgtg 660
tcctatggca acatcgctcg gacactgctg cacatccgct cagctgctga gcgctggaag 720
gcctttctcta cctgtgcagc tcacctgact gtggtagagc tcttctatgg cactcttttc 780
tttatgtatg tccagaccaa ggtgacctcc tccatcaact tcaacaagggt ggtatctgtc 840
ttctactctg ttgtcacgcc catgctcaat cctctcatct acagtcttag gaacaaggaa 900
gtgaaggagg ctctgggtcg agtcttttct ctcaactttt ggaagggaca gtga 954

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<210> 223
 <211> 309
 <212> PRT
 <213> Homo sapiens

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<400> 223
Met Lys Arg Lys Asn Phe Thr Glu Val Ser Glu Phe Ile Phe Leu Gly
  1              5              10              15

Phe Ser Ser Phe Gly Lys His Gln Ile Thr Leu Phe Val Val Phe Leu
      20              25              30

Thr Val Tyr Ile Leu Thr Leu Val Ala Asn Ile Ile Ile Val Thr Ile
      35              40              45

Ile Cys Ile Asp His His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
      50              55              60

Met Leu Ala Ser Ser Glu Thr Val Tyr Thr Leu Val Ile Val Pro Arg
      65              70              75              80

Met Leu Leu Ser Leu Ile Phe His Asn Gln Pro Ile Ser Leu Ala Gly
      85              90              95

Cys Ala Thr Gln Met Phe Phe Phe Val Ile Leu Ala Thr Asn Asn Cys
      100             105             110

Phe Leu Leu Thr Ala Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys Arg
      115             120             125

Pro Leu Arg Tyr Thr Val Ile Met Ser Lys Gly Leu Cys Ala Gln Leu
      130             135             140

Val Cys Gly Ser Phe Gly Ile Gly Leu Thr Met Ala Val Leu His Val
      145             150             155             160

Thr Ala Met Phe Asn Leu Pro Phe Cys Gly Thr Val Val Asp His Phe
      165             170             175

Phe Cys Asp Ile Tyr Pro Val Met Lys Leu Ser Cys Ile Asp Thr Thr
      180             185             190

Ile Asn Glu Ile Ile Asn Tyr Gly Val Ser Ser Phe Val Ile Phe Val
      195             200             205

Pro Ile Gly Leu Ile Phe Ile Ser Tyr Val Leu Val Ile Ser Ser Ile
      210             215             220

Leu Gln Ile Ala Ser Ala Glu Gly Arg Lys Lys Thr Phe Ala Thr Cys

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225 230 235 240
 Val Ser His Leu Thr Val Val Ile Val His Cys Gly Cys Ala Ser Ile
 245 250 255
 Ala Tyr Leu Lys Pro Lys Ser Glu Ser Ser Ile Glu Lys Asp Leu Val
 260 265 270
 Leu Ser Val Thr Tyr Thr Ile Ile Thr Pro Leu Leu Asn Pro Val Val
 275 280 285
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Leu Cys Arg Val Val
 290 295 300
 Gly Arg Asn Ile Ser
 305

<210> 224
 <211> 930
 <212> DNA
 <213> Homo sapiens

<400> 224
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 gctaacatca tcattgtgac tatcatctgc attgaccatc atctccacac tcccatgtat 180
 ttcttcctaa gcatgctggc tagttcagag acggtgtaca cactgggcat tgtgccacga 240
 atgcttttga gcctcatttt tcataaccaa cctatctcct tggcaggctg tgctacacaa 300
 atgttctttt ttgttatctt ggccactaat aattgcttcc tgcttactgc aatgggggtat 360
 gaccgctatg tggccatctg cagacccttg agatacactg tcatcatgag caaggggacta 420
 tgtgcccagc tgggtgtgtg gtcctttggc attgggtctga ctatggcagt tctccatgtg 480
 acagccatgt tcaatttgcc gttctgtggc acagtggtag accacttctt ttgtgacatt 540
 taccagtcga tgaaactttc ttgcattgat accactatca atgagataat aaattatgggt 600
 gtaagtccat ttgtgatttt tgtgcccata ggctgatat ttatctccta tgtccttgtc 660
 atctcttcca tccttcaaat tgctcagct gagggccgga agaagacctt tgccacctgt 720
 gtctcccacc tactgtgggt tattgtccac tgtggctgtg cctccattgc ctacctcaag 780
 ccgaagtcag aaagttcaat agaaaaagac cttgttctct cagtgcacgt caccatcatc 840
 actcccttgc tgaaccctgt tgtttacagt ctgagaaaaca aggaggtaaa ggatgcctta 900
 tgcagagttg tgggcagaaa tatttcttaa 930

<210> 225
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 225
 Met Glu Trp Glu Asn Gln Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15
 His Ser Val His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
 20 25 30
 Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45
 Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser

65		70		75		80									
Thr	Leu	Val	Ser	Phe	Leu	Ser	Glu	Arg	Lys	Thr	Ile	Ser	Phe	Ser	Gly
				85					90					95	
Cys	Ala	Val	Gln	Met	Phe	Leu	Gly	Leu	Ala	Met	Gly	Thr	Thr	Glu	Cys
			100					105					110		
Val	Leu	Leu	Gly	Met	Met	Ala	Phe	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn
		115					120					125			
Pro	Leu	Arg	Tyr	Pro	Ile	Ile	Met	Ser	Lys	Asn	Ala	Tyr	Val	Pro	Met
	130					135					140				
Ala	Val	Gly	Ser	Trp	Phe	Ala	Gly	Ile	Val	Asn	Ser	Ala	Val	Gln	Thr
145					150					155					160
Thr	Phe	Val	Val	Gln	Leu	Pro	Phe	Cys	Arg	Lys	Asn	Val	Ile	Asn	His
				165					170					175	
Phe	Ser	Cys	Glu	Ile	Leu	Ala	Val	Met	Lys	Leu	Ala	Cys	Ala	Asp	Ile
			180					185					190		
Ser	Gly	Asn	Glu	Phe	Leu	Met	Leu	Val	Ala	Thr	Ile	Leu	Phe	Thr	Leu
		195					200					205			
Met	Pro	Leu	Leu	Leu	Ile	Val	Ile	Ser	Tyr	Ser	Leu	Ile	Ile	Ser	Ser
	210					215					220				
Ile	Leu	Lys	Ile	His	Ser	Ser	Glu	Gly	Arg	Ser	Lys	Ala	Phe	Ser	Thr
225					230					235					240
Cys	Ser	Ala	His	Leu	Thr	Val	Val	Ile	Ile	Phe	Tyr	Gly	Thr	Ile	Leu
				245					250					255	
Phe	Met	Tyr	Met	Lys	Pro	Lys	Ser	Lys	Glu	Thr	Leu	Asn	Ser	Asp	Asp
			260					265					270		
Leu	Asp	Ala	Thr	Asp	Lys	Ile	Ile	Ser	Met	Phe	Tyr	Gly	Val	Met	Thr
		275					280					285			
Pro	Met	Met	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys
	290					295					300				
Glu	Ala	Val	Lys	His	Leu	Pro	Asn	Arg	Arg	Phe	Phe	Ser	Lys		
305					310					315					

<210> 226

<211> 957

<212> DNA

<213> Homo sapiens

<400> 226

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ccaaggcttg agttactcct ttttgtgcta atcttcataa tgtatgtggc caccctctg 120
gggaatggta ctctcatttt aatcagcatt ttggaccctc accttcacac ccctatgtac 180
ttctttcttg ggaacctctc cttcttggac atctgctaca ccaccacctc tattccctcc 240
acactagtga gcttcctttc agaaagaaag accatttcct tttctggctg tgcagtgcag 300
atgttccttg gcttggccat ggggacaaca gagtgtgtgc ttctgggcat gatggccttt 360
gaccgctatg tggctatctg caaccctctg agatatccca tcatcatgag caagaatgcc 420

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tatgtaccca tggctgttgg gtcctggttt gcagggattg tcaactctgc agtacaaact 480
acattttag tagacaattgcc tttctgcagg aagaatgtca tcaatcattt ctcattgtgaa 540
attctagctg tcatgaagtt ggctgtgtct gacatctcag gcaatgagtt cctcatgctt 600
gtggccacaa tattgttcac attgatgcca ctgctcttga tagttatctc ttactcatta 660
atcatttcca gcacccctcaa gattcactcc tctgagggga gaagcaaagc tttctctacc 720
tgctcagccc atctgactgt ggtcataata ttctatggga ccacccctctt catgtatatg 780
aagcccaagt ctaaagagac acttaattca gatgacttgg atgctaccga caaaattata 840
tccatgttct atggggtgat gactcccatg atgaatcctt taatctacag tcttagaaac 900
aaggatgtga aagaggcagt aaaacaccta ccgaacagaa gggttcttag caagtga 957

<210> 227

<211> 346

<212> PRT

<213> Homo sapiens

<400> 227

Met Tyr Arg Phe Thr Asp Phe Asp Val Ser Asn Ile Ser Ile Tyr Leu
1 5 10 15

Asn His Val Leu Phe Tyr Thr Thr Gln Gln Ala Gly Asp Leu Glu His
20 25 30

Met Glu Thr Arg Asn Tyr Ser Ala Met Thr Glu Phe Phe Leu Val Gly
35 40 45

Leu Ser Gln Tyr Pro Glu Leu Gln Leu Phe Leu Phe Leu Leu Cys Leu
50 55 60

Ile Met Tyr Met Ile Ile Leu Leu Gly Asn Ser Leu Leu Ile Ile Ile
65 70 75 80

Thr Ile Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
85 90 95

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ser Ile Pro Pro
100 105 110

Met Leu Ile Ile Phe Met Ser Glu Arg Lys Ser Ile Ser Phe Ile Gly
115 120 125

Cys Ala Leu Gln Met Val Val Ser Leu Gly Leu Gly Ser Thr Glu Cys
130 135 140

Val Leu Leu Ala Val Met Ala Tyr Asp His Tyr Val Ala Ile Cys Asn
145 150 155 160

Pro Leu Arg Tyr Ser Ile Ile Met Asn Gly Val Leu Tyr Val Gln Met
165 170 175

Ala Ala Trp Ser Trp Ile Ile Gly Cys Leu Thr Ser Leu Leu Gln Thr
180 185 190

Val Leu Thr Met Met Leu Pro Phe Cys Gly Asn Asn Val Ile Asp His
195 200 205

Ile Thr Cys Glu Ile Leu Ala Leu Leu Lys Leu Val Cys Ser Asp Ile
210 215 220

Thr Ile Asn Val Leu Ile Met Thr Val Thr Asn Ile Val Ser Leu Val
225 230 235 240

Ile Leu Leu Leu Leu Ile Phe Ile Ser Tyr Val Phe Ile Leu Ser Ser
 245 250 255

Ile Leu Arg Ile Asn Cys Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 260 265 270

Cys Ser Ala His Ser Ile Val Val Ile Leu Phe Tyr Gly Ser Ala Leu
 275 280 285

Phe Met Tyr Met Lys Pro Lys Ser Lys Asn Thr Asn Thr Ser Asp Glu
 290 295 300

Ile Ile Gly Leu Ser Tyr Gly Val Val Ser Pro Met Leu Asn Pro Ile
 305 310 315 320

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Val Lys Lys Val
 325 330 335

Leu Ser Arg His Leu His Leu Leu Lys Met
 340 345

<210> 228
 <211> 1041
 <212> DNA
 <213> Homo sapiens

<400> 228
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 atgactgaat tctttctggg ggggctttcc caatatccag agctccagct ttttctgttc 180
 ctgctctgcc tcatcatgta catgataatc ctctctgggaa atagcctcct cattatcatc 240
 accatcttgg attctcgcc ccatactccc atgtatttct ttcttggaaa cctctcattc 300
 ttggacatct gttacacatc ctcacccatt cctccaatgc ttattatatt tatgtctgag 360
 agaaaatcca tctccttcat tggctgtgct ctgcagatgg ttgtgtccct tggcttgggc 420
 tccactgagt gtgtcctcct ggctgtgatg gcctatgacc actatgtggc catctgcaac 480
 ccactgaggt actccatcat catgaacgga gtgctgtatg tgcaaatggc tgcattggcc 540
 tggatcatag gctgtctgac ctccctattg caaacagttc tgacaatgat gttgcctttc 600
 tgtgggaata atgtcattga tcatattacc tgtgaaattt tggcccttct aaaacttggt 660
 tgttcagata tcaccatcaa tgtgcttacc atgacagtga caaatattgt ttactgggtg 720
 attctctac tgttaatttt catctcctat gtgtttattc tctcttccat cctgagaatt 780
 aattgtgctg aggggaagaaa gaaagccttc tctacctgtt cagcgccactc gattgtgggc 840
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 acatctgatg agattattgg gctgtcttat ggagtggtaa gcccaatgtt aaatcccatc 960
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 ctgcatttat tgaaaatgtg a 1041

<210> 229
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Asn His Ser Val Val Thr Glu Phe Ile Ile Leu Gly Leu Thr Lys
 1 5 10 15
 Lys Pro Glu Leu Gln Gly Ile Ile Phe Leu Phe Phe Leu Ile Val Tyr
 20 25 30

Leu Val Ala Phe Leu Gly Asn Met Leu Ile Ile Ile Ala Lys Ile Tyr
 35 40 45
 Asn Asn Thr Leu His Thr Pro Met Tyr Val Phe Leu Leu Thr Leu Ala
 50 55 60
 Val Val Asp Ile Ile Cys Thr Thr Ser Ile Ile Pro Lys Met Leu Gly
 65 70 75 80
 Thr Met Leu Thr Ser Glu Asn Thr Ile Ser Tyr Ala Gly Cys Met Ser
 85 90 95
 Gln Leu Phe Leu Phe Thr Trp Ser Leu Gly Ala Glu Met Val Leu Phe
 100 105 110
 Thr Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu His
 115 120 125
 Tyr Ser Thr Val Met Asn His His Met Cys Val Ala Leu Leu Ser Met
 130 135 140
 Val Met Ala Ile Ala Val Thr Asn Ser Trp Val His Thr Ala Leu Ile
 145 150 155 160
 Met Arg Leu Thr Phe Cys Gly Pro Asn Thr Ile Asp His Phe Phe Cys
 165 170 175
 Glu Ile Pro Pro Leu Leu Ala Leu Ser Cys Ser Pro Val Arg Ile Asn
 180 185 190
 Glu Val Met Val Tyr Val Ala Asp Ile Thr Leu Ala Ile Gly Asp Phe
 195 200 205
 Ile Leu Thr Cys Ile Ser Tyr Gly Phe Ile Ile Val Ala Ile Leu Arg
 210 215 220
 Ile Arg Thr Val Glu Gly Lys Arg Lys Ala Phe Ser Thr Cys Ser Ser
 225 230 235 240
 His Leu Thr Val Val Thr Leu Tyr Tyr Ser Pro Val Ile Tyr Thr Tyr
 245 250 255
 Ile Arg Pro Ala Ser Ser Tyr Thr Phe Glu Arg Asp Lys Val Val Ala
 260 265 270
 Ala Leu Tyr Thr Leu Val Thr Pro Thr Leu Asn Pro Met Val Tyr Ser
 275 280 285
 Phe Gln Asn Arg Glu Met Gln Ala Gly Ile Arg Lys Val Phe Ala Phe
 290 295 300
 Leu Lys His
 305

<210> 230

<211> 924

<212> DNA

<213> Homo sapiens

<400> 230

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atgaatcaca gcgttgtaac tgagttcatt attctgggcc tcaccaaaaa gcctgaactc 60
caggaatta tcttcctctt ttttctcatt gtctatcttg tggcttttct cggcaacatg 120
ctcatcatca ttgccaaaat ctataacaac accttgcata cgcccatgta tgttttcctt 180
ctgacactgg ctggttgtag catcatctgc acaacaagca tcataccgaa gatgctgggg 240
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ttcacatggt ctctgggagc tgagatggtt ctcttcacca ccatggccta tgaccgctat 360
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ttgctcagca tggtcatggc tattgcagtc accaattcct ggggtgcacac agctcttatc 480
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ttgctggctt tgtcctgtag ccctgtaaga atcaatgagg tgatgggtga tgttgctgat 600
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gctattctcc gtatccgcac agtagaaggc aagaggaagg ccttctcaac atgctcatct 720
catctcacag tggtgaccct ttactattct cctgtaatct acacctatat ccgccctgct 780
tccagctata catttgaaag agacaagggt gtagctgcac tctatactct tgtgactccc 840
acattaaacc cgatggtgta cagcttccag aatagggaga tgcaggcagg aattaggaag 900
gtgtttgcat ttctgaaaca ctag 924

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<210> 231
 <211> 315
 <212> PRT
 <213> Homo sapiens

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<400> 231
Met Thr Asn Gln Thr Gln Met Met Glu Phe Leu Leu Val Arg Phe Thr
  1                      5                      10                      15

Glu Asn Trp Val Leu Leu Arg Leu His Ala Leu Leu Phe Ser Leu Ile
      20                      25                      30

Tyr Leu Thr Ala Val Leu Met Asn Leu Val Ile Ile Leu Leu Met Ile
      35                      40                      45

Leu Asp His Arg Leu His Met Ala Met Tyr Phe Phe Leu Arg His Leu
      50                      55                      60

Ser Phe Leu Asp Leu Cys Leu Ile Ser Ala Thr Val Pro Lys Ser Ile
      65                      70                      75                      80

Leu Asn Ser Val Ala Ser Thr Asp Ser Ile Ser Phe Leu Gly Cys Val
      85                      90                      95

Leu Gln Leu Phe Leu Val Val Leu Leu Ala Gly Ser Glu Ile Gly Ile
      100                     105                     110

Leu Thr Ala Met Ser Tyr Asp Arg Tyr Ala Ala Ile Cys Cys Pro Leu
      115                     120                     125

His Cys Glu Ala Val Met Ser Arg Gly Leu Cys Val Gln Leu Met Ala
      130                     135                     140

Leu Ser Trp Leu Asn Arg Gly Ala Leu Gly Leu Leu Tyr Thr Ala Gly
      145                     150                     155                     160

Thr Phe Ser Leu Asn Phe Tyr Gly Ser Asp Glu Leu His Gln Phe Phe
      165                     170                     175

Cys Asp Val Pro Ala Leu Leu Lys Leu Thr Cys Ser Lys Glu His Ala
      180                     185                     190

Ile Ile Ser Val Ser Val Ala Ile Gly Val Cys Tyr Ala Phe Ser Cys

```


195

200

205

Leu Val Cys Ile Val Val Ser Tyr Val Tyr Ile Phe Ser Ala Val Leu
 210 215 220

Arg Ile Ser Gln Arg Gln Arg Gln Ser Lys Ala Phe Ser Asn Cys Val
 225 230 235 240

Pro His Leu Ile Val Val Thr Val Phe Leu Val Thr Gly Ala Val Ala
 245 250 255

Tyr Leu Lys Pro Gly Ser Asp Ala Pro Ser Ile Leu Asp Leu Leu Val
 260 265 270

Ser Val Phe Tyr Ser Val Ala Pro Pro Thr Leu Asn Pro Val Ile Tyr
 275 280 285

Cys Leu Lys Asn Lys Asp Ile Lys Ser Ala Leu Ser Lys Val Leu Trp
 290 295 300

Asn Val Arg Ser Ser Gly Val Met Lys Asp Asp
 305 310 315

<210> 232

<211> 948

<212> DNA

<213> Homo sapiens

<400> 232

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 ttatcatca ttctctcat gattctggac catcgctccc acatggcaat gtactttttc 180
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 ctcaactctg tcgctccac tgactccatc tccttctctg ggtgtgtgtt gcagctcttc 300
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 ccaaccttga accctgttat ctactgtctg aagaacaagg acattaaatc cgctctgagt 900
 aaagtccctg ggaatgtag aagcagtggg gtaatgaaag atgactaa 948

<210> 233

<211> 325

<212> PRT

<213> Homo sapiens

<400> 233

Met Phe Leu Tyr Leu Cys Phe Ile Phe Gln Arg Thr Cys Ser Glu Glu
 1 5 10 15

Met Glu Glu Glu Asn Ala Thr Leu Leu Thr Glu Phe Val Leu Thr Gly
 20 25 30

Phe Leu His Gln Pro Asp Cys Lys Ile Pro Leu Phe Leu Ala Phe Leu

35

40

45

Val Ile Tyr Leu Ile Thr Ile Met Gly Asn Leu Gly Leu Ile Val Leu
 50 55 60
 Ile Trp Lys Asp Pro His Leu His Ile Pro Met Tyr Leu Phe Leu Gly
 65 70 75 80
 Ser Leu Ala Phe Val Asp Ala Ser Leu Ser Ser Thr Val Thr Pro Lys
 85 90 95
 Met Leu Ile Asn Phe Leu Ala Lys Ser Lys Met Ile Ser Leu Ser Glu
 100 105 110
 Cys Met Val Gln Phe Phe Ser Leu Val Thr Thr Val Thr Thr Glu Cys
 115 120 125
 Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys
 130 135 140
 Ala Leu Leu Tyr Pro Val Ile Met Thr Asn Glu Leu Cys Ile Gln Leu
 145 150 155 160
 Leu Val Leu Ser Phe Ile Gly Gly Leu Leu His Ala Leu Ile His Glu
 165 170 175
 Ala Phe Ser Phe Arg Leu Thr Phe Cys Asn Ser Asn Ile Ile Gln His
 180 185 190
 Phe Tyr Cys Asp Ile Ile Pro Leu Leu Lys Ile Ser Cys Thr Asp Ser
 195 200 205
 Ser Ile Asn Phe Leu Met Val Phe Ile Phe Ala Gly Ser Val Gln Val
 210 215 220
 Phe Thr Ile Gly Thr Ile Leu Ile Ser Tyr Thr Ile Ile Leu Phe Thr
 225 230 235 240
 Ile Leu Glu Lys Lys Ser Ile Lys Gly Ile Arg Lys Ala Val Ser Thr
 245 250 255
 Cys Gly Ala His Leu Leu Ser Val Ser Leu Tyr Tyr Gly Pro Leu Thr
 260 265 270
 Phe Lys Tyr Leu Gly Ser Ala Ser Pro Gln Ala Asp Asp Gln Asp Met
 275 280 285
 Met Glu Ser Leu Phe Tyr Thr Val Ile Val Pro Leu Leu Asn Pro Met
 290 295 300
 Ile Tyr Ser Leu Arg Asn Lys Gln Val Ile Ala Ser Phe Thr Lys Met
 305 310 315 320
 Phe Lys Ser Asn Val
 325

<210> 234

<211> 978

<212> DNA

<213> Homo sapiens

<400> 234
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ataccgctct tcctggcatt cttggttaata tatctcatca ccatcatggg gaatcttggg 180
ctaattgttc tcatctggaa agaccctcac cttcatatcc caatgtactt attccttggg 240
agtttagcct ttgtggatgc ttcgttatca tccacagtga ctccgaagat gctgatcaac 300
ttcttagcta agagtaagat gatattctctc tctgaatgca tgggtacaatt tttttccctt 360
gtaaccactg taaccacaga atgttttctc ttggcaacaa tggcatatga tcgctatgta 420
gccatttgca aagctttact ttatccagtc attatgacca atgaactatg cattcagcta 480
ttagtcttgt catttatagg tggccttctt catgctttaa tccatgaagc tttttcattc 540
agattaacct tctgtaattc caacataata caacactttt actgtgacat tatcccattg 600
ttaaagattt cctgtactga ttcctctatt aacttttctaa tgggtttttat tttcgcaggg 660
tctgttcaag tttttaccat tggaactatt cttatatctt atacaattat cctctttaca 720
atcttagaaa agaagtctat caaagggata cgaaaagctg tctccacctg tggggctcat 780
ctcttatctg tatctttata ctatggcccc ctcaccttca aatatctggg ctctgcattc 840
ccgcaagcag atgaccaaga tatgatggag tctctatttt acactgtcat agttccttta 900
ttaaatccca tgatctacag cctgagaaac aagcaagtaa tagcttcatt cacaaaaaatg 960
ttcaaaagca atgttttag 978

<210> 235
<211> 314
<212> PRT
<213> Homo sapiens

<400> 235
Met Ser Asn Glu Asp Met Glu Gln Asp Asn Thr Thr Leu Leu Thr Glu
1 5 10 15
Phe Val Leu Thr Gly Leu Thr Tyr Gln Pro Glu Trp Lys Met Pro Leu
20 25 30
Phe Leu Val Phe Leu Val Ile Tyr Leu Ile Thr Ile Val Trp Asn Leu
35 40 45
Gly Leu Ile Ala Leu Ile Trp Asn Asp Pro Gln Leu His Ile Pro Met
50 55 60
Tyr Phe Phe Leu Gly Ser Leu Ala Phe Val Asp Ala Trp Ile Ser Ser
65 70 75 80
Thr Val Thr Pro Lys Met Leu Val Asn Phe Leu Ala Lys Asn Arg Met
85 90 95
Ile Ser Leu Ser Glu Cys Met Ile Gln Phe Phe Ser Phe Ala Phe Gly
100 105 110
Gly Thr Thr Glu Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr
115 120 125
Val Ala Ile Cys Lys Pro Leu Leu Tyr Pro Val Ile Met Asn Asn Ser
130 135 140
Leu Cys Ile Arg Leu Leu Ala Phe Ser Phe Leu Gly Gly Phe Leu His
145 150 155 160
Ala Leu Ile His Glu Val Leu Ile Phe Arg Leu Thr Phe Cys Asn Ser
165 170 175
Asn Ile Ile His His Phe Tyr Cys Asp Ile Ile Pro Leu Phe Met Ile

180 185 190
 Ser Cys Thr Asp Pro Ser Ile Asn Phe Leu Met Val Phe Ile Leu Ser
 195 200 205
 Gly Ser Ile Gln Val Phe Thr Ile Val Thr Val Leu Asn Ser Tyr Thr
 210 215 220
 Phe Ala Leu Phe Thr Ile Leu Lys Lys Lys Ser Val Arg Gly Val Arg
 225 230 235 240
 Lys Ala Phe Ser Thr Cys Gly Ala His Leu Leu Ser Val Ser Leu Tyr
 245 250 255
 Tyr Gly Pro Leu Ile Phe Met Tyr Leu Arg Pro Ala Ser Pro Gln Ala
 260 265 270
 Asp Asp Gln Asp Met Ile Asp Ser Val Phe Tyr Thr Ile Ile Ile Pro
 275 280 285
 Leu Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Gln Val Ile Asp
 290 295 300
 Ser Phe Thr Lys Met Val Lys Arg Asn Val
 305 310

<210> 236
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 236
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 ctcataccta ttgtgtggaa ccttggtctg attgctctta tctggaatga cccacaactt 180
 cacatcccca tgtacttttt tcttgggagt ttagcctttg ttgatgcttg gatattcttc 240
 acagtaactc ccaaaatggt gggttaatttc ttggccaaaa acaggatgat atctctgtct 300
 gaatgcatga ttcaattttt ttccctttgca ttgggtggaa ctacagaatg ttttctcttg 360
 gcaacaatgg catatgatcg ctatgtagcc atatgcaaac ctttactata tccagtgtat 420
 atgaacaatt cactatgcat acggtctgta gccttctcat ttttaggtgg cttcctccat 480
 gccttaattc atgaagtcct tatattcaga ttaaccttct gcaattctaa cataatacat 540
 catttttact gtgatattat accactgttt atgatttctt gtactgaccc ttctattaat 600
 tttctaattg tttttatttt gtctggctca attcaggat taccattgt gacagttctt 660
 aattcttaca catttgctct ttccacaatc ctaaaaaaga agtctgttag aggcgtaagg 720
 aaagcctttt ccacctgtgg agcccatctc ttatctgtct ctttatatta tggcccactt 780
 atcttcatgt atttgcgccc tgcattctca caagcagatg accaagatat gatagactct 840
 gtcttttata caatcataat tcctttgcta aatcccatta tctacagtct gagaaataaa 900
 caagtaatag attcattcac aaaaatggta aaaagaaatg ttttag 945

<210> 237
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 237
 Met Glu Thr Gln Asn Leu Thr Val Val Thr Glu Phe Ile Leu Leu Gly
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 Leu Thr Gln Ser Gln Asp Ala Gln Leu Leu Val Phe Val Leu Val Leu

20					25					30					
Ile	Phe	Tyr	Leu	Ile	Ile	Leu	Pro	Gly	Asn	Phe	Leu	Ile	Ile	Phe	Thr
		35					40					45			
Ile	Lys	Ser	Asp	Pro	Gly	Leu	Thr	Ala	Pro	Leu	Tyr	Phe	Phe	Leu	Gly
	50					55					60				
Asn	Leu	Ala	Leu	Leu	Asp	Ala	Ser	Tyr	Ser	Phe	Ile	Val	Val	Pro	Arg
65						70					75				80
Met	Leu	Val	Asp	Phe	Leu	Ser	Glu	Lys	Lys	Val	Ile	Ser	Tyr	Arg	Ser
				85					90					95	
Cys	Ile	Thr	Gln	Leu	Phe	Phe	Leu	His	Phe	Leu	Gly	Ala	Gly	Glu	Met
			100					105					110		
Phe	Leu	Leu	Val	Val	Met	Ala	Phe	Asp	Arg	Tyr	Ile	Ala	Ile	Cys	Arg
			115					120					125		
Pro	Leu	His	Tyr	Ser	Thr	Ile	Met	Asn	Pro	Arg	Ala	Cys	Tyr	Ala	Leu
						130					140				
Ser	Leu	Val	Leu	Trp	Leu	Gly	Gly	Phe	Ile	His	Ser	Ile	Val	Gln	Val
145						150					155				160
Ala	Leu	Ile	Leu	His	Leu	Pro	Phe	Cys	Gly	Pro	Asn	Gln	Leu	Asp	Asn
				165					170					175	
Phe	Phe	Cys	Asp	Val	Pro	Gln	Val	Ile	Lys	Leu	Ala	Cys	Thr	Asn	Thr
			180					185						190	
Phe	Val	Val	Glu	Leu	Leu	Met	Val	Ser	Asn	Ser	Gly	Leu	Leu	Ser	Leu
			195				200					205			
Leu	Cys	Phe	Leu	Gly	Leu	Leu	Ala	Ser	Tyr	Ala	Val	Ile	Leu	Cys	Arg
	210					215					220				
Ile	Arg	Glu	His	Ser	Ser	Glu	Gly	Lys	Ser	Lys	Ala	Ile	Ser	Thr	Cys
225						230					235				240
Thr	Thr	His	Ile	Ile	Ile	Ile	Phe	Leu	Met	Phe	Gly	Pro	Ala	Ile	Phe
				245					250					255	
Ile	Tyr	Thr	Cys	Pro	Phe	Gln	Ala	Phe	Pro	Ala	Asp	Lys	Val	Val	Ser
			260					265					270		
Leu	Phe	His	Thr	Val	Ile	Phe	Pro	Leu	Met	Asn	Pro	Val	Ile	Tyr	Thr
			275				280					285			
Leu	Arg	Asn	Gln	Glu	Val	Lys	Ala	Ser	Met	Arg	Lys	Leu	Leu	Ser	Gln
	290					295					300				
His	Met	Phe	Cys												
305															

<210> 238
 <211> 927
 <212> DNA
 <213> Homo sapiens

<400> 238

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ggaaatttcc tcatcatttt caccataaag tcagacctg ggctcacagc cccctctat 180
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ctctttttct tgcattttct tggagcggga gagatgttcc tcctcgttgt gatggccttt 360
gaccgctaca tcgccatctg ccggccttta cactattcaa ccatcatgaa ccctagagcc 420
tgctatgcat tatcgttggt tctgtggctt gggggcttta tccattccat tgtacaagta 480
gcccttatcc tgcacttgcc tttctgtggc ccaaaccagc tcgataactt cttctgtgat 540
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tccaacagtg gcctgtcag cctcctgtgc ttctgggcc ttctggcctc ctatgcagtc 660
atcctctgtc gtataaggga gcactcctct gaaggaaaga gcaaggctat ttccacatgc 720
accaccata ttatcattat atttctcatg tttggacctg ctattttcat ctacacttgc 780
cccttccagg ctttcccagc tgacaaggta gtttctcttt tccatactgt catctttcct 840
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<210> 239

<211> 343

<212> PRT

<213> Homo sapiens

<400> 239

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Met Ala Leu Tyr Phe Ser Leu Ile Leu His Gly Met Ser Asp Leu Phe
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Phe Leu Ser Thr Gly His Pro Arg Ala Ser Cys Arg Met Glu Ala Met
      20                      25                      30

Lys Leu Leu Asn Gln Ser Gln Val Ser Glu Phe Ile Leu Leu Gly Leu
      35                      40                      45

Thr Ser Ser Gln Asp Val Glu Phe Leu Leu Phe Ala Leu Phe Ser Val
      50                      55                      60

Ile Tyr Val Val Thr Val Leu Gly Asn Leu Leu Ile Ile Val Thr Val
      65                      70                      75                      80

Phe Asn Thr Pro Asn Leu Asn Thr Pro Met Tyr Phe Leu Leu Gly Asn
      85                      90                      95

Leu Ser Phe Val Asp Met Thr Leu Ala Ser Phe Ala Thr Pro Lys Val
      100                      105                      110

Ile Leu Asn Leu Leu Lys Lys Gln Lys Val Ile Ser Phe Ala Gly Cys
      115                      120                      125

Phe Thr Gln Ile Phe Leu Leu His Leu Leu Gly Gly Val Glu Met Val
      130                      135                      140

Leu Leu Val Ser Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro
      145                      150                      155                      160

Leu His Tyr Met Thr Ile Met Asn Lys Lys Val Cys Val Leu Leu Val
      165                      170                      175

Val Thr Ser Trp Leu Leu Gly Leu Leu His Ser Gly Phe Gln Ile Pro
      180                      185                      190
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Phe Ala Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser Ile
195 200 205

Phe Cys Asp Leu Pro Leu Val Thr Lys Leu Ala Cys Ile Asp Ile Tyr
210 215 220

Phe Val Gln Val Val Ile Val Ala Asn Ser Gly Ile Ile Ser Leu Ser
225 230 235 240

Cys Phe Ile Ile Leu Leu Ile Ser Tyr Ser Leu Ile Leu Ile Thr Ile
245 250 255

Lys Asn His Ser Pro Thr Gly Gln Ser Lys Ala Arg Ser Thr Leu Thr
260 265 270

Ala His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Ile
275 280 285

Tyr Ile Trp Pro Phe Gly Asn His Ser Val Asp Lys Phe Leu Ala Val
290 295 300

Phe Tyr Thr Ile Ile Thr Pro Ile Leu Asn Pro Ile Ile Tyr Thr Leu
305 310 315 320

Arg Asn Lys Glu Met Lys Ile Ser Met Lys Lys Leu Trp Arg Ala Phe
325 330 335

Val Asn Ser Arg Glu Asp Thr
340

<210> 240

<211> 1032

<212> DNA

<213> Homo sapiens

<400> 240

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tgtttcatta ttttgcttat ctctacagt ctgatcctca taaccattaa gaaccactct 780
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ttccttgctg tgttttatac catcatcact cctatcttga atccaattat ctatactctg 960
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gaagatactt ag 1032
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<210> 241

<211> 309

<212> PRT

<213> Homo sapiens

<400> 241

Met Ala Ser Thr Ser Asn Val Thr Glu Leu Ile Phe Thr Gly Leu Phe
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Gln Asp Pro Ala Val Gln Ser Val Cys Phe Val Val Phe Leu Pro Val
20 25 30
Tyr Leu Ala Thr Val Val Gly Asn Gly Leu Ile Val Leu Thr Val Ser
35 40 45
Ile Ser Lys Ser Leu Asp Ser Pro Met Tyr Phe Phe Leu Ser Cys Leu
50 55 60
Ser Leu Val Glu Ile Ser Tyr Ser Ser Thr Ile Ala Pro Lys Phe Ile
65 70 75 80
Ile Asp Leu Leu Ala Lys Ile Lys Thr Ile Ser Leu Glu Gly Cys Leu
85 90 95
Thr Gln Ile Phe Phe Phe His Phe Phe Gly Val Ala Glu Ile Leu Leu
100 105 110
Ile Val Val Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125
His Tyr Met Asn Ile Ile Ser Arg Gln Leu Cys His Leu Leu Val Ala
130 135 140
Gly Ser Trp Leu Gly Gly Phe Cys His Ser Ile Ile Gln Ile Leu Val
145 150 155 160
Ile Ile Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp His Tyr Phe
165 170 175
Cys Asp Leu Gln Pro Leu Phe Lys Leu Ala Cys Thr Asp Thr Phe Met
180 185 190
Glu Gly Val Ile Val Leu Ala Asn Ser Gly Leu Phe Ser Val Phe Ser
195 200 205
Phe Leu Ile Leu Val Ser Ser Tyr Ile Val Ile Leu Val Asn Leu Arg
210 215 220
Asn His Ser Ala Glu Gly Arg His Lys Ala Leu Ser Thr Cys Ala Ser
225 230 235 240
His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Ala Ile Phe Leu Tyr
245 250 255
Met Arg Pro Ser Ser Thr Phe Thr Glu Asp Lys Leu Val Ala Val Phe
260 265 270
Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Thr Leu Arg
275 280 285
Asn Ala Glu Val Lys Ile Ala Ile Arg Arg Leu Trp Ser Lys Lys Glu
290 295 300
Asn Pro Gly Arg Glu

305

<210> 242
<211> 930
<212> DNA
<213> Homo sapiens

<400> 242
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ggcctcatcg ttctgacggt cagtatcagc aagagtctgg attctcccat gtacttcttc 180
cttagctgcc tgtccttggg ggagatcagt tattcctcca ctatcgcccc taaattcatc 240
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cttctggtgg ctggttctct gctggggggc ttttgtcact ccataattca gattctcggt 480
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cctttattca agcttgccctg cactgacacc ttcattggagg gggttattgt gttggccaac 600
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cacatcacag tggatcatct gtttttttga cctgctatct tcctctacat gcgaccttct 780
tccactttca ctgaagataa acttggtggc gtattctaca cggatcatcac ccccatgctg 840
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agcaaaaagg agaattcagg gagggagtg 930

<210> 243
<211> 305
<212> PRT
<213> Homo sapiens

<400> 243
Met Val Ala Thr Asn Asn Val Thr Glu Ile Ile Phe Val Gly Phe Ser
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Gln Asn Trp Ser Glu Gln Arg Val Ile Ser Val Met Phe Leu Leu Met
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Tyr Thr Ala Val Val Leu Gly Asn Gly Leu Ile Val Val Thr Ile Leu
35 40 45
Ala Ser Lys Val Leu Thr Ser Pro Met Tyr Phe Phe Leu Ser Tyr Leu
50 55 60
Ser Phe Val Glu Ile Cys Tyr Cys Ser Val Met Ala Pro Lys Leu Ile
65 70 75 80
Phe Asp Ser Phe Ile Lys Arg Lys Val Ile Ser Leu Lys Gly Cys Leu
85 90 95
Thr Gln Met Phe Ser Leu His Phe Phe Gly Gly Thr Glu Ala Phe Leu
100 105 110
Leu Met Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125
His Tyr Met Ala Ile Met Asn Gln Arg Met Cys Gly Leu Leu Val Arg
130 135 140
Ile Ala Trp Gly Gly Gly Leu Leu His Ser Val Gly Gln Thr Phe Leu

145 150 155 160
 Ile Phe Gln Leu Pro Phe Cys Gly Pro Asn Ile Met Asp His Tyr Phe
 165 170 175
 Cys Asp Val His Pro Val Leu Glu Leu Ala Cys Ala Asp Thr Phe Phe
 180 185 190
 Ile Ser Leu Leu Ile Ile Thr Asn Gly Gly Ser Ile Ser Val Val Ser
 195 200 205
 Phe Phe Val Leu Met Ala Ser Tyr Leu Ile Ile Leu His Phe Leu Arg
 210 215 220
 Ser His Asn Leu Glu Gly Gln His Lys Ala Leu Ser Thr Cys Ala Ser
 225 230 235 240
 His Val Thr Val Val Asp Leu Phe Phe Ile Pro Cys Ser Leu Val Tyr
 245 250 255
 Ile Arg Pro Cys Val Thr Leu Pro Ala Asp Lys Ile Val Ala Val Phe
 260 265 270
 Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Val Ile Tyr Ser Phe Arg
 275 280 285
 Asn Ala Glu Val Lys Asn Ala Met Arg Arg Phe Ile Gly Gly Lys Val
 290 295 300

Ile
305

<210> 244
 <211> 918
 <212> DNA
 <213> Homo sapiens

<400> 244
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 ggccctcattg tggtgaccat cctggccagc aaagtgtctc cctcccccat gtatttcttt 180
 ctcagctact tatcctttgt ggagatctgc tactgttctg tcatggcccc caagcttatc 240
 tttgactcct ttatcaagag gaaagtcatt tctctcaagg gctgcctcac acagatgttt 300
 tccctccatt tctttggtgg cactgaggcc tttctcctga tggatgatggc ctatgaccgc 360
 tatgtggcca tctgcaagcc cttgcactac atggccatca tgaaccagcg aatgtgtggt 420
 ctccctcgtga ggatagcatg gggcgggggc ctgctgcatt ctgttgggca aaccttctctg 480
 attttccagc tcccgttctg tggccccaac atcatggacc actacttctg tgatgtccac 540
 ccagtgtctg agctggcctg cgcagacacc ttcttcatta gcctgctgat catcaccaat 600
 ggcggctcca tctccgtagt cagtttcttc gtgctgatgg ctccctacct gatcatcctg 660
 cacttcctga gaagccacaa cttggagggg cagcacaagg ccctctccac ctgtgcctct 720
 catgtcacag ttgtcgacct gttcttcata ccttgctcct tgggtctatat taggccctgt 780
 gtcaccctcc ctgcagacaa gatagtgtgt gtattttata cagtgggtcac acctctctta 840
 aacctgtgta ttactcctt caggaatgct gaagtgaata atgccatgag gagatttatt 900
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<210> 245
 <211> 303
 <212> PRT
 <213> Homo sapiens

<400> 245

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			20					25					30		
Gly	Asn	Phe	Leu	Ile	Val	Leu	Thr	Val	Met	Thr	Ser	Arg	Ser	Leu	Gly
		35					40					45			
Ser	Pro	Met	Tyr	Phe	Phe	Leu	Ser	Tyr	Leu	Ser	Phe	Met	Glu	Ile	Cys
	50					55					60				
Tyr	Ser	Ser	Ala	Thr	Ala	Pro	Lys	Leu	Ile	Ser	Asp	Leu	Leu	Ala	Glu
65					70					75					80
Arg	Lys	Val	Ile	Ser	Trp	Trp	Gly	Cys	Met	Ala	Gln	Leu	Phe	Phe	Leu
				85					90					95	
His	Phe	Phe	Gly	Gly	Thr	Glu	Ile	Phe	Leu	Leu	Thr	Val	Met	Ala	Tyr
			100					105					110		
Asp	His	Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu	Ser	Tyr	Thr	Thr	Ile	Met
		115					120					125			
Asn	Trp	Gln	Val	Cys	Thr	Val	Leu	Val	Gly	Ile	Ala	Trp	Val	Gly	Gly
	130					135					140				
Phe	Met	His	Ser	Phe	Ala	Gln	Ile	Leu	Leu	Ile	Phe	His	Leu	Leu	Phe
145					150					155					160
Cys	Gly	Pro	Asn	Val	Ile	Asn	His	Tyr	Phe	Cys	Asp	Leu	Val	Pro	Leu
				165					170					175	
Leu	Lys	Leu	Ala	Cys	Ser	Asp	Thr	Phe	Leu	Ile	Gly	Leu	Leu	Ile	Val
			180					185					190		
Ala	Asn	Gly	Gly	Thr	Leu	Ser	Val	Ile	Ser	Phe	Gly	Val	Leu	Leu	Ala
		195					200					205			
Ser	Tyr	Met	Val	Ile	Leu	Leu	His	Leu	Arg	Thr	Trp	Ser	Ser	Glu	Gly
	210					215					220				
Trp	Cys	Lys	Ala	Leu	Ser	Thr	Cys	Gly	Ser	His	Phe	Ala	Val	Val	Ile
225					230					235					240
Leu	Phe	Phe	Gly	Pro	Cys	Val	Phe	Asn	Ser	Leu	Arg	Pro	Ser	Thr	Thr
				245					250					255	
Leu	Pro	Ile	Asp	Lys	Met	Val	Ala	Val	Phe	Tyr	Thr	Val	Ile	Thr	Ala
			260					265					270		
Ile	Leu	Asn	Pro	Val	Ile	Tyr	Ser	Leu	Arg	Asn	Ala	Glu	Met	Arg	Lys
		275					280					285			
Ala	Met	Lys	Arg	Leu	Trp	Ile	Arg	Thr	Leu	Arg	Leu	Asn	Glu	Lys	
	290					295					300				

<210> 246

<211> 912
 <212> DNA
 <213> Homo sapiens

<400> 246
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 gtcacatgacca gcagaagcct tgggtccccc atgtacttct tcctcagcta cctctccttc 180
 atggagatct gctactcctc cgctacagcc cccaaactca tctcagatct gctggctgaa 240
 aggaaagtca tatcttggtg gggctgcatg gcacagcttt tcttcttgca cttctttggt 300
 ggcactgaga ttttctgct cactgtgatg gcctatgacc actatgtggc catctgcaag 360
 cccctcagct acaccacat catgaactgg caggtgtgta ctgtccttgt aggaatagca 420
 tgggtgggag gcttcacgca ttcctttgca caaatccttc tcactctcca cctgctcttc 480
 tgtggcccca atgtgatcaa tcactatttc tgtgacctag ttccccttct caaacttgcc 540
 tgctctgaca ccttcctcat tggctctgctg attgttgcca atggaggcac cctgtctgtg 600
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 aagatggtgg ctgtgttcta cacagtata accgcgatcc tgaacctgt catctactct 840
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 aatgagaaat ag 912

<210> 247
 <211> 325
 <212> PRT
 <213> Homo sapiens

<400> 247
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 Phe Ser Ile Phe Leu Ala Thr Tyr Leu Leu Thr Leu Leu Glu Asn Leu
 35 40 45
 Leu Ile Ile Leu Ala Ile His Ser Asp Gly Gln Leu His Lys Pro Met
 50 55 60
 Tyr Phe Phe Leu Ser His Leu Ser Phe Leu Glu Met Trp Tyr Val Thr
 65 70 75 80
 Val Ile Ser Pro Lys Met Leu Val Asp Phe Leu Ser His Asp Lys Ser
 85 90 95
 Ile Ser Phe Asn Gly Cys Met Thr Gln Leu Tyr Phe Phe Val Thr Phe
 100 105 110
 Val Cys Thr Glu Tyr Ile Leu Leu Ala Ile Met Ala Phe Asp Arg Tyr
 115 120 125
 Val Ala Ile Cys Asn Pro Leu Arg Tyr Pro Val Ile Met Thr Asn Gln
 130 135 140
 Leu Cys Gly Thr Leu Ala Gly Gly Cys Trp Phe Cys Gly Leu Met Thr
 145 150 155 160
 Ala Met Ile Lys Met Val Phe Ile Ala Gln Leu His Tyr Cys Gly Met
 165 170 175

Pro Gln Ile Asn His Tyr Phe Cys Asp Ile Ser Pro Leu Leu Asn Val
 180 185 190

Ser Cys Glu Asp Ala Ser Gln Ala Glu Met Val Asp Phe Phe Leu Ala
 195 200 205

Leu Met Val Ile Ala Ile Pro Leu Cys Val Val Val Ala Ser Tyr Ala
 210 215 220

Ala Ile Leu Ala Thr Ile Leu Arg Ile Pro Ser Ala Gln Gly Arg Gln
 225 230 235 240

Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Leu Phe
 245 250 255

Tyr Ser Met Thr Leu Phe Thr Tyr Ala Arg Pro Lys Leu Met Tyr Ala
 260 265 270

Tyr Asn Ser Asn Lys Val Val Ser Val Leu Tyr Thr Val Ile Val Pro
 275 280 285

Leu Leu Asn Pro Ile Ile Tyr Cys Leu Arg Asn His Glu Val Lys Ala
 290 295 300

Ala Leu Arg Lys Thr Ile His Cys Arg Gly Ser Gly Pro Gln Gly Asn
 305 310 315 320

Gly Ala Phe Ser Ser
 325

<210> 248
 <211> 978
 <212> DNA
 <213> Homo sapiens

<400> 248
 atgaccacca taattctgga agtagataat catacagtga caacacgttt cattcttctg 60
 ggggtttccaa caccgaccagc cttccagctt ctctttttct ccattttcct ggcaacctat 120
 ctgctgacac tgctggagaa tcttcttctt atcttagcta tccacagtga tgggcagctg 180
 cataagccca tgtacttctt cttagagccac ctctccttcc tggagatgtg gtatgtcaca 240
 gtcacagcc ccaagatgct tgttgacttc ctcagtcag acaagagtat ttccttcaat 300
 ggctgcatga ctcaacttta cttttttgtg accttgtct gcactgagta catccttctt 360
 gctatcatgg cctttgaccg ctatgtagcc atttgtaate cactacgcta cccagtcate 420
 atgaccaacc agctctgtgg cactactggc ggaggatgct gggtctgtgg actcatgact 480
 gccatgatta agatgggttt tatagcacia cttcactact gtggcatgcc tcagatcaat 540
 cactactttt gtgatatctc tccactcctt aacgtctcct gtgaggatgc ctcacaggct 600
 gagatgggtg acttcttctt ggccctcatg gtcattgcta ttctctttg tgttggtggtg 660
 gcacccacg ctgctatcct tgccaccatc ctcaggatcc cttctgctca gggccgccaa 720
 aaggcattct ccacctgtgc ctcccacctg accgtcgtaa ttctcttcta ttccatgaca 780
 cttttcacct atgcccgtcc caaactcatg tatgcctaca attccaacaa agtggtatct 840
 gttctctaca ctgtcattgt tccactcctc aaccccatca tttactgtct gaggaaccat 900
 gaagtaaagg cagccctcag aaagaccata cattgcagag gaagtgggcc ccaggggaaat 960
 ggggctttca gtagttaa 978

<210> 249
 <211> 327
 <212> PRT
 <213> Homo sapiens

<400> 249

Met	Ile	Phe	Pro	Ser	His	Asp	Ser	Gln	Ala	Phe	Thr	Ser	Val	Asp	Met
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Glu	Val	Gly	Asn	Cys	Thr	Ile	Leu	Thr	Glu	Phe	Ile	Leu	Leu	Gly	Phe
			20					25					30		
Ser	Ala	Asp	Ser	Gln	Trp	Gln	Pro	Ile	Leu	Phe	Gly	Val	Phe	Leu	Met
		35					40					45			
Leu	Tyr	Leu	Ile	Thr	Leu	Ser	Gly	Asn	Met	Thr	Leu	Val	Ile	Leu	Ile
	50					55					60				
Arg	Thr	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Ile	Gly	Asn
	65				70					75					80
Leu	Ser	Phe	Leu	Asp	Phe	Trp	Tyr	Thr	Ser	Val	Tyr	Thr	Pro	Lys	Ile
				85					90					95	
Leu	Ala	Ser	Cys	Val	Ser	Glu	Asp	Lys	Arg	Ile	Ser	Leu	Ala	Gly	Cys
			100					105					110		
Gly	Ala	Gln	Leu	Phe	Phe	Ser	Cys	Val	Val	Ala	Tyr	Thr	Glu	Cys	Tyr
		115					120					125			
Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	His	Ala	Ala	Ile	Cys	Asn	Pro
	130					135					140				
Leu	Leu	Tyr	Ser	Gly	Thr	Met	Ser	Thr	Ala	Leu	Cys	Thr	Gly	Leu	Val
	145				150					155					160
Ala	Gly	Ser	Tyr	Ile	Gly	Gly	Phe	Leu	Asn	Ala	Ile	Ala	His	Thr	Ala
				165					170					175	
Asn	Thr	Phe	Arg	Leu	His	Phe	Cys	Gly	Lys	Asn	Ile	Ile	Asp	His	Phe
			180					185					190		
Phe	Cys	Asp	Ala	Pro	Pro	Leu	Val	Lys	Met	Ser	Cys	Thr	Asn	Thr	Arg
		195					200					205			
Val	Tyr	Glu	Lys	Val	Leu	Leu	Gly	Val	Val	Gly	Phe	Thr	Val	Leu	Ser
	210					215					220				
Ser	Ile	Leu	Ala	Ile	Leu	Ile	Ser	Tyr	Val	Asn	Ile	Leu	Leu	Ala	Ile
	225				230					235					240
Leu	Arg	Ile	His	Ser	Ala	Ser	Gly	Arg	His	Lys	Ala	Phe	Ser	Thr	Cys
				245					250					255	
Ala	Ser	His	Leu	Ile	Ser	Val	Met	Leu	Phe	Tyr	Gly	Ser	Leu	Leu	Phe
			260					265					270		
Met	Tyr	Ser	Arg	Pro	Ser	Ser	Thr	Tyr	Ser	Leu	Glu	Arg	Asp	Lys	Val
		275					280					285			
Ala	Ala	Leu	Phe	Tyr	Thr	Val	Ile	Asn	Pro	Leu	Leu	Asn	Pro	Leu	Ile
		290				295					300				
Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Ile	Lys	Glu	Ala	Phe	Arg	Lys	Ala	Thr
	305				310					315					320

Gln Thr Ile Gln Pro Gln Thr
325

<210> 250
<211> 984
<212> DNA
<213> Homo sapiens

<400> 250
atgattttcc cttctcatga tagtcaggct ttcacctccg tggacatgga agtgggaaat 60
tgcaccatcc tgactgaatt catcttggtg ggtttctcag cagattccca gtggcagccg 120
attctatttg gagtgtttct gatgctctat ttgataacct tgtcaggaaa catgaccttg 180
gttatcttaa tccgaactga ttcccacttg catcaccta tgtacttttt cattggcaat 240
ctgtcttttt tggatttctg gtatacctct gtgtataccc ccaaaatcct ggccagttgt 300
gtctcagaag ataagcgcac ttccttggct ggatgtgggg ctcagctgtt tttttcctgt 360
gttgtagcct aactgaatg ctatctcctg gcagccatgg catatgaccg ccatgcagca 420
atgtgtaacc cattgcttta ttcagggtacc atgtccaccg ccctctgtac tgggcttgtt 480
gctggctcct acataggagg atttttgaat gccatagccc atactgccaa tacattccgc 540
ctgcattttt gtggtaaaaa tatcattgac cactttttct gtgatgcacc accattggta 600
aaaatgtcct gtacaaacac cagggctctac gaaaaagtcc tgcttggtgt ggtgggcttc 660
acagtactct ccagcattct tgctatcctg atttccctatg tcaacatcct cctggctatc 720
ctgagaatcc actcagcttc aggaagacac aaggcattct ccacctgtgc ttcccacctc 780
atctcagtc tgccttctta tggatcattg ttgtttatgt attcaaggcc tagttccacc 840
tactccctag agagggacaa agtagctgct ctgttctaca ccgtgatcaa cccactgctc 900
aaccctctca tctatagcct gagaaacaaa gatatcaaag aggccttcag gaaagcaaca 960
cagactatac aaccacaaac atga 984

<210> 251
<211> 308
<212> PRT
<213> Homo sapiens

<400> 251
Met Thr Met Glu Asn Tyr Ser Met Ala Ala Gln Phe Val Leu Asp Gly
1 5 10 15
Leu Thr Gln Gln Ala Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30
Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Ile Leu Leu
35 40 45
Ile Ala Val Ser Pro Leu Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
50 55 60
Ser Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
65 70 75 80
Met Leu Val Asn Phe Leu Gly Lys Lys Asn Thr Ile Leu Tyr Ser Glu
85 90 95
Cys Met Val Gln Leu Phe Phe Phe Val Val Phe Val Val Ala Glu Gly
100 105 110
Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
115 120 125
Pro Leu Leu Tyr Asn Ala Ile Met Ser Ser Trp Val Cys Ser Leu Leu

130	135	140
Val Leu Ala Ala Phe Phe Leu Gly Phe Leu Ser Ala Leu Thr His Thr		
145	150	155 160
Ser Ala Met Met Lys Leu Ser Phe Cys Lys Ser His Ile Ile Asn His		
	165	170 175
Tyr Phe Cys Asp Val Leu Pro Leu Leu Asn Leu Ser Cys Ser Asn Thr		
	180	185 190
His Leu Asn Glu Leu Leu Leu Phe Ile Ile Ala Gly Phe Asn Thr Leu		
	195	200 205
Val Pro Thr Leu Ala Val Ala Val Ser Tyr Ala Phe Ile Leu Tyr Ser		
	210	215 220
Ile Leu His Ile Arg Ser Ser Glu Gly Arg Ser Lys Ala Phe Gly Thr		
225	230	235 240
Cys Ser Ser His Leu Met Ala Val Val Ile Phe Phe Gly Ser Ile Thr		
	245	250 255
Phe Met Tyr Phe Lys Pro Pro Ser Ser Asn Ser Leu Asp Gln Glu Lys		
	260	265 270
Val Ser Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu		
	275	280 285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Arg Lys Val		
	290	295 300
Leu Val Gly Lys		
305		

<210> 252
 <211> 927
 <212> DNA
 <213> Homo sapiens

<400> 252
 atgaccatgg aaaattattc tatggcagct cagtttgtct tagatgggtt aacacagcaa 60
 gcagagctcc agctgcccct ctctctctcg ttcttgaggaa tctatgtggg cacagtagtg 120
 ggcaacctgg gcatgattct cctgattgca gtcagccctc tacttcacac ccccatgtac 180
 tatttcctca gcagcttggtc ctctgtcgat ttctgtctatt cctctgtcat tactcccaa 240
 atgctgggtga acttcctagg aaagaagaat acaatccttt actctgagtg catgggtccag 300
 ctctttttct ttgtggtctt tgtggtggct gaggggtacc tctgactgc catggcatat 360
 gatcgctatg ttgccatctg tagcccaactg ctttataatg cgatcatgtc ctcatgggtc 420
 tgetcactgc tagtgctggc tgccttcttc ttgggctttc tctctgcctt gactcataca 480
 agtgccatga tgaaactgtc cttttgcaaa tcccacatta tcaaccatta cttctgtgat 540
 gttcttcccc tctcaatctc ctctgtctcc aacacacacc tcaatgagct tctacttttt 600
 atcattgctg ggtttaaacac cttggtgccc accctagctg ttgctgtctc ctatgccttc 660
 atcctctaca gcacacctca catccgctcc tcagagggcc ggtccaaagc ttttgaaca 720
 tgcagctctc atctcatggc tgtggtgatc ttctttgggt ccattacctt catgtatttc 780
 aagccccctt caagtaactc cctggaccag gagaagggtg cctctgtgtt ctacaccacg 840
 gtgatcccca tgctgaacct ttaatatatac agtctgagga ataaggatgt gaagaaagca 900
 ttaaggaagg tcttagtagg aaaatga 927

<210> 253

<211> 322
<212> PRT
<213> Homo sapiens

<400> 253
Met Ser Pro Glu Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Leu Gly
1 5 10 15
Leu Pro Ile Arg Pro Glu Gln Gln Ala Val Phe Phe Ala Leu Phe Leu
20 25 30
Gly Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Leu Ile Met Leu Leu
35 40 45
Ile Gln Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60
His Leu Ala Leu Thr Asp Ile Ser Phe Ser Ser Val Thr Val Pro Lys
65 70 75 80
Met Leu Met Asn Met Gln Thr Gln His Leu Ala Val Phe Tyr Lys Gly
85 90 95
Cys Ile Ser Gln Thr Tyr Phe Phe Ile Phe Phe Ala Asp Leu Asp Ser
100 105 110
Phe Leu Ile Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125
Pro Leu His Tyr Ala Thr Ile Met Thr Gln Ser Gln Cys Val Met Leu
130 135 140
Val Ala Gly Ser Trp Val Ile Ala Cys Ala Cys Ala Leu Leu His Thr
145 150 155 160
Leu Leu Leu Ala Gln Leu Ser Phe Cys Ala Asp His Ile Ile Pro His
165 170 175
Tyr Phe Cys Asp Leu Gly Ala Leu Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190
Ser Leu Asn Gln Leu Ala Ile Phe Thr Ala Ala Leu Thr Ala Ile Met
195 200 205
Leu Pro Phe Leu Cys Ile Leu Val Ser Tyr Gly His Ile Gly Val Thr
210 215 220
Ile Leu Gln Ile Pro Ser Thr Lys Gly Ile Cys Lys Ala Leu Ser Thr
225 230 235 240
Cys Gly Ser His Leu Ser Val Val Thr Ile Tyr Tyr Arg Thr Ile Ile
245 250 255
Gly Leu Tyr Phe Leu Pro Pro Ser Ser Asn Thr Asn Asp Lys Asn Ile
260 265 270
Ile Ala Ser Val Ile Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe
275 280 285
Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Gly Ala Leu Arg Lys Leu
290 295 300

Leu Ser Arg Ser Gly Ala Val Ala His Ala Cys Asn Leu Ser Thr Leu
 305 310 315 320

Gly Gly

<210> 254
 <211> 969
 <212> DNA
 <213> Homo sapiens

<400> 254
 atgagccctg agaaccagag cagcgtgtcc gagttcctcc tcctgggcct ccccatccgg 60
 ccagagcagc aggccgtgtt cttcgccctg ttcctgggca tgtacctgac cagggtgctg 120
 gggaacctgc tcatcatgct gctcatccag ctagactctc accttcacac ccccatgtac 180
 ttcttcctta gccacttggc cctcactgac atctcctttt catctgtcac tgtccctaag 240
 atgctgatga acatgcagac tcagcaccta gccgtctttt acaagggatg catttcacag 300
 acatattttt tcatattttt tgctgactta gacagtttcc ttatcacttc aatggcatat 360
 gacaggtatg tggccatctg tcatcctcta cattatgcc aatcatgac tcagagccag 420
 tgtgtcatgc tgggtggctgg gtcctgggtc atcgcttggt cgtgtgctct ttgcatatcc 480
 ctctcctggg cccagctttc cttctgtgct gaccacatca tccctcacta cttctgtgac 540
 cttggtgccc tgctcaagtt gtctgtctca gacacctccc tcaatcagtt agcaatcttt 600
 acagcagcat tgacagccat tatgcttcca ttcctgtgca tcctgggtttc ttatgggtcac 660
 attggggatc ccatcctcca gattcctctt accaaggcca tatgcaaagc cttgtccact 720
 tgtggatccc acctctcagt ggtgactatc tattatcgga caattattgg tctctatttt 780
 cttcccccat ccagcaacac caatgacaag aacataattg cttcagtgat atacacagca 840
 gtcactccca tgttgaacct attcatttac agtctgagaa ataaagacat taaggagacc 900
 ctaagaaaac tcttgagtag gtcaggcgca gtggctcatg cctgtaatct cagcactttg 960
 ggaggctga 969

<210> 255
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 255
 Met Leu Asn Phe Thr Asp Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Ser Arg Arg Glu Trp Gln Val Leu Phe Phe Ile Val Phe Leu Val Val
 20 25 30
 Tyr Ile Ile Thr Val Val Gly Asn Ile Gly Met Met Leu Leu Ile Lys
 35 40 45
 Val Ser Pro Gln Leu Asn Ser Pro Met Tyr Phe Phe Leu Ser His Leu
 50 55 60
 Ser Phe Val Asp Val Trp Phe Ser Ser Asn Val Thr Pro Lys Met Leu
 65 70 75 80
 Glu Asn Leu Phe Ser Asp Lys Lys Thr Ile Ser Tyr Ala Asp Cys Leu
 85 90 95
 Ala Gln Cys Phe Phe Phe Ile Ala Leu Val His Val Glu Ile Phe Ile
 100 105 110
 Leu Ala Ala Ile Ala Phe Asp Arg Tyr Thr Val Ile Gly Asn Pro Leu

115						120						125					
Leu	Tyr	Gly	Ser	Lys	Met	Ser	Arg	Gly	Val	Cys	Ile	Arg	Leu	Ile	Thr		
130						135					140						
Phe	Pro	Tyr	Ile	Tyr	Gly	Phe	Leu	Thr	Ser	Leu	Thr	Ala	Thr	Leu	Trp		
145					150					155					160		
Thr	Tyr	Gly	Leu	Tyr	Phe	Cys	Gly	Lys	Ile	Glu	Ile	Asn	His	Phe	Tyr		
			165						170					175			
Cys	Ala	Asp	Pro	Pro	Leu	Ile	Lys	Met	Ala	Cys	Ala	Gly	Thr	Phe	Val		
			180					185					190				
Lys	Glu	Tyr	Thr	Met	Leu	Ile	Leu	Ala	Gly	Ile	Asn	Phe	Thr	Tyr	Ser		
		195					200					205					
Leu	Thr	Val	Ile	Ile	Ile	Ser	Tyr	Leu	Phe	Ile	Leu	Ile	Ala	Ile	Leu		
	210						215					220					
Arg	Met	Arg	Ser	Ala	Glu	Gly	Arg	Gln	Lys	Ala	Phe	Ser	Thr	Cys	Gly		
225					230					235					240		
Ser	His	Pro	Thr	Ala	Val	Ile	Ile	Phe	Tyr	Gly	Thr	Leu	Ile	Phe	Met		
				245					250					255			
Tyr	Leu	Arg	Arg	Pro	Thr	Glu	Glu	Ser	Val	Glu	Gln	Gly	Lys	Met	Val		
			260					265					270				
Ala	Val	Phe	Tyr	Thr	Thr	Val	Ile	Pro	Met	Leu	Asn	Pro	Met	Ile	Tyr		
	275						280					285					
Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys	Lys	Ala	Met	Met	Lys	Val	Ile	Ser		
	290						295					300					
Arg	Ser	Cys															
305																	

<210> 256
 <211> 924
 <212> DNA
 <213> Homo sapiens

<400> 256
 atgctcaatt tcaccgatgt gacagagttc attcttttgg ggctaacgag ccgtcgggaa 60
 tggcaagttc tcttcttcat cgtttttctt gtggtctaca ttatcacctg ggtgggcaat 120
 atcggcatga tgttgtaaat caaggctcagt cctcagctta acagcccat gtactttttc 180
 ctcaatcact tgtcatttgt tgatgtgtgg ttttcttcca atgtcacccc taaaatgttg 240
 gaaaatctgt tatcagataa aaaaacaatt tcttatgctg gctgttttagc acagtgtttc 300
 ttcttcattg ctcttggtcca tgtggaaatt tttattcttg ctgcgattgc ctttgataga 360
 tacacagtga ttggaaatcc tttgctttat ggcagcaaaa tgtcaaggga tgtctgtatt 420
 cgactgatta ctttccctta catttatggg tttctgacga gtctgacagc aacattatgg 480
 acttatggct tgtacttctg tggaaaaatt gagatcaacc atttctactg tgcagatcca 540
 cctctcatca aaatggcctg tgccgggacc tttgtaaaag aatatacaat gtcatactt 600
 gccggcatca acttcacata ttccctgact gtaattatca tctcttactt attcatcctc 660
 attgccattc tgcgaatgcg ctcagcagaa ggaaggcaga aggccttttc cacatgtggg 720
 tcccactga cagctgtcat catattctat ggtactctga tcttcatgta tctcagacgt 780
 cccacagagg agtctgtgga gcaggggaag atgggtggctg tgttctatac cacagtgatc 840
 cccatgttga atcccatgat ctacagtctg aggaacaagg atgtgaaaaa ggccatgatg 900
 aaagtgatca gcagatcatg ttaa 924

<210> 257
<211> 299
<212> PRT
<213> Homo sapiens

<400> 257
Met Gly Phe Pro Gly Ile His Ser Trp Gln His Trp Leu Ser Leu Pro
1 5 10 15
Leu Ala Leu Leu Tyr Leu Leu Ala Leu Ser Ala Asn Ile Leu Ile Leu
20 25 30
Ile Ile Ile Asn Lys Glu Ala Ala Leu His Gln Pro Met Tyr Tyr Phe
35 40 45
Leu Gly Ile Leu Ala Met Ala Asp Ile Gly Leu Ala Thr Thr Ile Met
50 55 60
Pro Lys Ile Leu Ala Ile Leu Trp Phe Asn Ala Lys Thr Ile Ser Leu
65 70 75 80
Leu Glu Cys Phe Ala Gln Met Tyr Ala Ile His Cys Phe Val Ala Met
85 90 95
Glu Ser Ser Thr Phe Val Cys Met Ala Ile Asp Arg Tyr Val Ala Ile
100 105 110
Cys Arg Pro Leu Arg Tyr Pro Ser Ile Ile Thr Glu Ser Phe Val Phe
115 120 125
Lys Ala Asn Gly Phe Met Ala Leu Arg Asn Ser Leu Cys Leu Ile Ser
130 135 140
Val Pro Leu Leu Ala Ala Gln Arg His Tyr Cys Ser Gln Asn Gln Ile
145 150 155 160
Glu His Cys Leu Cys Ser Asn Leu Gly Val Thr Ser Leu Ser Cys Asp
165 170 175
Asp Arg Arg Ile Asn Ser Ile Asn Gln Val Leu Leu Ala Trp Thr Leu
180 185 190
Met Gly Ser Asp Leu Gly Leu Ile Ile Leu Ser Tyr Ala Leu Ile Leu
195 200 205
Tyr Ser Val Leu Lys Leu Asn Ser Pro Glu Ala Ala Ser Lys Ala Leu
210 215 220
Ser Thr Cys Thr Ser His Leu Ile Leu Ile Leu Phe Phe Tyr Thr Val
225 230 235 240
Ile Ile Val Ile Ser Ile Thr Arg Ser Thr Gly Met Arg Val Pro Leu
245 250 255
Ile Pro Val Leu Leu Asn Val Leu His Asn Val Ile Pro Pro Ala Leu
260 265 270
Asn Pro Met Val Tyr Ala Leu Lys Asn Lys Glu Leu Arg Gln Gly Leu
275 280 285

Tyr Lys Val Leu Arg Leu Gly Val Lys Gly Thr
290 295

<210> 258
<211> 900
<212> DNA
<213> Homo sapiens

<400> 258
atgggattcc ctggcattca cagttggcag cactggctct ccctgcccct ggctctgctc 60
tacctcttag ctctcagtgc caacatcctt atcctgatca tcatcaacaa agaggcagca 120
ctgcaccagc ctatgtacta tttcctgggc atcctgggcta tggcagacat aggcctggct 180
accaccatca tgcctaagat tttggccatc ttatgggtca atgctaagac catcagtctc 240
ctggagtgct ttgctcagat gtatgccata cattgctttg tggccatgga atcaagtacc 300
tttgtctgca tggctattga tagatatgta gccatttgtc gaccgctacg atatccatca 360
atcatcactg aatcttttgt tttcaaagca aatgggttca tggcactgag aaacagcctg 420
tgtctcatct cagtgcctct gttggctgcc cagaggcatt actgctccca gaatcaaatt 480
gagcactgtc tttgttctaa ccttggagtc actagcctat cttgtgatga tcgaagaatc 540
aatagcatta accaggtcct tttggcttgg acactcatgg gaagtgcctt ggggttgatt 600
attttatcat atgctctaata actttactct gtcctgaagc tgaactctcc agaagctgca 660
tccaaggcct taagtacctg caccctccac ctcatcttaa tccttttctt ctacacagtc 720
atcattgtga tttccattac tcgtagtaca ggaatgagag ttccccttat tccagttcta 780
cttaatgtgc tacacaatgt cattccccct gccctgaacc ccatgggtata tgcactcaag 840
aacaaggaac tcaggcaagg cttatacaag gtacttagac tgggagtga gggcacctga 900

<210> 259
<211> 321
<212> PRT
<213> Homo sapiens

<400> 259
Met Leu Thr Leu Asn Lys Thr Asp Leu Ile Pro Ala Ser Phe Ile Leu
1 5 10 15
Asn Gly Val Pro Gly Leu Glu Asp Thr Gln Leu Trp Ile Ser Phe Pro
20 25 30
Phe Cys Ser Met Tyr Val Val Ala Met Val Gly Asn Cys Gly Leu Leu
35 40 45
Tyr Leu Ile His Tyr Glu Asp Ala Leu His Lys Pro Met Tyr Tyr Phe
50 55 60
Leu Ala Met Leu Ser Phe Thr Asp Leu Val Met Cys Ser Ser Thr Ile
65 70 75 80
Pro Lys Ala Leu Cys Ile Phe Trp Phe His Leu Lys Asp Ile Gly Phe
85 90 95
Asp Glu Cys Leu Val Gln Met Phe Phe Ile His Thr Phe Thr Gly Met
100 105 110
Glu Ser Gly Val Leu Met Leu Met Ala Leu Asp Arg Tyr Val Ala Ile
115 120 125
Cys Tyr Pro Leu Arg Tyr Ser Thr Ile Leu Thr Asn Pro Val Ile Ala
130 135 140

Lys Val Gly Thr Ala Thr Phe Leu Arg Gly Val Leu Leu Ile Ile Pro
 145 150 155 160
 Phe Thr Phe Leu Thr Lys Arg Leu Pro Tyr Cys Arg Gly Asn Ile Leu
 165 170 175
 Pro His Thr Tyr Cys Asp His Met Ser Val Ala Lys Leu Ser Cys Gly
 180 185 190
 Asn Val Lys Val Asn Ala Ile Tyr Gly Leu Met Val Ala Leu Leu Ile
 195 200 205
 Gly Gly Phe Asp Ile Leu Cys Ile Thr Ile Ser Tyr Thr Met Ile Leu
 210 215 220
 Arg Ala Val Val Ser Leu Ser Ser Ala Asp Ala Arg Gln Lys Ala Phe
 225 230 235 240
 Asn Thr Cys Thr Ala His Ile Cys Ala Ile Val Phe Ser Tyr Thr Pro
 245 250 255
 Ala Phe Phe Ser Phe Phe Ser His Arg Phe Gly Glu His Ile Ile Pro
 260 265 270
 Pro Ser Cys His Ile Ile Val Ala Asn Ile Tyr Leu Leu Leu Pro Pro
 275 280 285
 Thr Met Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Gln Ile Arg Asp
 290 295 300
 Cys Val Ile Arg Ile Leu Ser Gly Ser Lys Asp Thr Lys Ser Tyr Ser
 305 310 315 320

Met

<210> 260
 <211> 966
 <212> DNA
 <213> Homo sapiens

<400> 260
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 atggtaggga attgtggact cctctacctc attcactatg aggatgccct gcacaaaccc 180
 atgtactact tcttggccat gctttccttt actgaccttg ttatgtgctc tagtacaatc 240
 cctaaagccc tctgcatcct ctggtttcat ctcaaggaca ttggatttga tgaatgcctt 300
 gtccagatgt tcttcatcca caccttcaca gggatggagt ctgggggtgct tatgcttatg 360
 gccctggatc gctatgtggc catctgctac cccttacgct attcaactat cctcaccaat 420
 cctgtaattg caaaggttgg gactgccacc ttcctgagag gggattact cattattccc 480
 tttactttcc tcaccaagcg cctgccctac tgcagaggca atatacttcc ccatacctac 540
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 ggtctgatgg ttgccctcct gattgggggc ttgacatac tgtgtatcac catctcctat 660
 accatgattc tccgggcagt ggtcagcctc tcctcagcag atgctcggca gaaggccttt 720
 aatacctgca ctgcccacat ttgtgccatt gttttctcct atactccage tttcttctcc 780
 ttcttttccc accgcttttg ggaacacata atccccctt cttgccacat cattgtagcc 840
 aatattttatc tgctcctacc acccactatg aaccctattg tctatggggt gaaaaccaa 900
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 atgtga 966

<210> 261
<211> 329
<212> PRT
<213> Homo sapiens

<400> 261
Met Ser Ser Thr Leu Gly His Asn Met Glu Ser Pro Asn His Thr Asp
1 5 10 15
Val Asp Pro Ser Val Phe Phe Leu Leu Gly Ile Pro Gly Leu Glu Gln
20 25 30
Phe His Leu Trp Leu Ser Leu Pro Val Cys Gly Leu Gly Thr Ala Thr
35 40 45
Ile Val Gly Asn Ile Thr Ile Leu Val Val Val Ala Thr Glu Pro Val
50 55 60
Leu His Lys Pro Val Tyr Leu Phe Leu Cys Met Leu Ser Thr Ile Asp
65 70 75 80
Leu Ala Ala Ser Val Ser Thr Val Pro Lys Leu Leu Ala Ile Phe Trp
85 90 95
Cys Gly Ala Gly His Ile Ser Ala Ser Ala Cys Leu Ala Gln Met Phe
100 105 110
Phe Ile His Ala Phe Cys Met Met Glu Ser Thr Val Leu Leu Ala Met
115 120 125
Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg Tyr Ala Thr
130 135 140
Ile Leu Thr Asp Thr Ile Ile Ala His Ile Gly Val Ala Ala Val Val
145 150 155 160
Arg Gly Ser Leu Leu Met Leu Pro Cys Pro Phe Leu Ile Gly Arg Leu
165 170 175
Asn Phe Cys Gln Ser His Val Ile Leu His Thr Tyr Cys Glu His Met
180 185 190
Ala Val Val Lys Leu Ala Cys Gly Asp Thr Arg Pro Asn Arg Val Tyr
195 200 205
Gly Leu Thr Ala Ala Leu Leu Val Ile Gly Val Asp Leu Phe Cys Ile
210 215 220
Gly Leu Ser Tyr Ala Leu Ser Ala Gln Ala Val Leu Arg Leu Ser Ser
225 230 235 240
His Glu Ala Arg Ser Lys Ala Leu Gly Thr Cys Gly Ser His Val Cys
245 250 255
Val Ile Leu Ile Ser Tyr Thr Pro Ala Leu Phe Ser Phe Phe Thr His
260 265 270
Arg Phe Gly His His Val Pro Val His Ile His Ile Leu Leu Ala Asn
275 280 285
Val Tyr Leu Leu Leu Pro Pro Ala Leu Asn Pro Val Val Tyr Gly Val

290

295

300

Lys Thr Lys Gln Ile Arg Lys Arg Val Val Arg Val Phe Gln Ser Gly
 305 310 315 320

Gln Gly Met Gly Ile Lys Ala Ser Glu
 325

<210> 262

<211> 990

<212> DNA

<213> Homo sapiens

<400> 262

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gtgtgtggct taggcacagc cacaattgtg ggcaatataa ctattctggg tgttgTtgcc 180
actgaaccag tcttgCacaa gcctgtgtac ctttttctgt gcatgctctc aaccatcgac 240
ttggctgcct ctgtctccac agttcccaag ctactggcta tcttctgggt tggagccgga 300
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gagtccactg tgctactggc catggccttt gatcgctacg tggccatctg ccaccactc 420
cgctatgcca caatcctcac tgacaccatc attgccaca taggggtggc agctgtagtg 480
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gacaccaggc ctaaccgtgt gtatgggctg acagctgcac tgttggtcat tggggttgac 660
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catgaagctc ggtccaaggc cctagggacc tgtgggtccc atgtctgtgt catcctcatc 780
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cagggaatgg gcatcaaggc atctgagtga
  
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<210> 263

<211> 314

<212> PRT

<213> Homo sapiens

<400> 263

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Met Leu Gly Leu Asn Gly Thr Pro Phe Gln Pro Ala Thr Leu Gln Leu
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Thr Gly Ile Pro Gly Ile Gln Thr Gly Leu Thr Trp Val Ala Leu Ile
  20 25 30
Phe Cys Ile Leu Tyr Met Ile Ser Ile Val Gly Asn Leu Ser Ile Leu
  35 40 45
Thr Leu Val Phe Trp Glu Pro Ala Leu His Gln Pro Met Tyr Tyr Phe
  50 55 60
Leu Ser Met Leu Ala Leu Asn Asp Leu Gly Val Ser Phe Ser Thr Leu
  65 70 75 80
Pro Thr Val Ile Ser Thr Phe Cys Phe Asn Tyr Asn His Val Ala Phe
  85 90 95
Asn Ala Cys Leu Val Gln Met Phe Phe Ile His Thr Phe Ser Phe Met
  100 105 110
  
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Glu Ser Gly Ile Leu Leu Ala Met Ser Leu Asp Arg Phe Val Ala Ile
 115 120 125
 Cys Tyr Pro Leu Arg Tyr Val Thr Val Leu Thr His Asn Arg Ile Leu
 130 135 140
 Ala Met Gly Leu Gly Ile Leu Thr Lys Ser Phe Thr Thr Leu Phe Pro
 145 150 155 160
 Phe Pro Phe Val Val Lys Arg Leu Pro Phe Cys Lys Gly Asn Val Leu
 165 170 175
 His His Ser Tyr Cys Leu His Pro Asp Leu Met Lys Val Ala Cys Gly
 180 185 190
 Asp Ile His Val Asn Asn Ile Tyr Gly Leu Leu Val Ile Ile Phe Thr
 195 200 205
 Tyr Gly Met Asp Ser Thr Phe Ile Leu Leu Ser Tyr Ala Leu Ile Leu
 210 215 220
 Arg Ala Met Leu Val Ile Ile Ser Gln Glu Gln Arg Leu Lys Ala Leu
 225 230 235 240
 Asn Thr Cys Met Ser His Ile Cys Ala Val Leu Ala Phe Tyr Val Pro
 245 250 255
 Ile Ile Ala Val Ser Met Ile His Arg Phe Trp Lys Ser Ala Pro Pro
 260 265 270
 Val Val His Val Met Met Ser Asn Val Tyr Leu Phe Val Pro Pro Met
 275 280 285
 Leu Asn Pro Ile Ile Tyr Ser Val Lys Thr Lys Glu Ile Arg Lys Gly
 290 295 300
 Ile Leu Lys Phe Phe His Lys Ser Gln Ala
 305 310

<210> 264
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 264
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 attgtaggta acctcagcat tctcactctg gtgttttggg agcctgctct gcatcagccc 180
 atgtactact tcctctctat gctcgctctc aatgatctgg gagtgtcctt ttctacactt 240
 cccactgtga tttctacttt ctgcttcaac tacaaccatg ttgcgtttta tgcttgcttg 300
 gtccagatgt tcttcatcca cactttctcc ttcattggagt caggcatact gctggccatg 360
 agcttggatc gctttgtggc tatttgttat ccattacgct atgtcactgt gctcactcac 420
 aaccgtatat tggctatggg tctgggcatc cttaccaaga gtttcaccac tctcttccct 480
 ttcccttttg tggtgaaacg actgcccttc tgcaaaggca atgttttgca tcaactcctac 540
 tgtctccatc cagatctcat gaaagtagca tgtggagaca tccatgttaa caacatttat 600
 gggctcttgg tgatcatttt tacctatggg atggactcaa ctttcactct gctttcctac 660
 gcattgatcc tgagagccat gctggctcat atatcccagg aacagcggct caaggcactc 720
 aacacctgca tgtcacacat ctgtgcagt ctggcctttt atgtgccc atattgctgtc 780
 tccatgattc accgcttctg gaaaagtgt ccacctgttg ttcattgtcat gatgtccaat 840
 gtctacctgt ttgtaccacc catgctcaac cctatcatct acagtgtgaa aaccaaggag 900

atccgcaaag ggattctcaa gttcttccat aaatcccagg cctga

945

<210> 265

<211> 312

<212> PRT

<213> Homo sapiens

<400> 265

Met Gly Leu Phe Asn Val Thr His Pro Ala Phe Phe Leu Leu Thr Gly
1 5 10 15

Ile Pro Gly Leu Glu Ser Ser His Ser Trp Leu Ser Gly Pro Leu Cys
20 25 30

Val Met Tyr Ala Val Ala Leu Gly Gly Asn Thr Val Ile Leu Gln Ala
35 40 45

Val Arg Val Glu Pro Ser Leu His Glu Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Met Leu Ser Phe Ser Asp Val Ala Ile Ser Met Ala Thr Leu Pro Thr
65 70 75 80

Val Leu Arg Thr Phe Cys Leu Asn Ala Arg Asn Ile Thr Phe Asp Ala
85 90 95

Cys Leu Ile Gln Met Phe Leu Ile His Phe Phe Ser Met Met Glu Ser
100 105 110

Gly Ile Leu Leu Ala Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asp
115 120 125

Pro Leu Arg Tyr Ala Thr Val Leu Thr Thr Glu Val Ile Ala Ala Met
130 135 140

Gly Leu Gly Ala Ala Ala Arg Ser Phe Ile Thr Leu Phe Pro Leu Pro
145 150 155 160

Phe Leu Ile Lys Arg Leu Pro Ile Cys Arg Ser Asn Val Leu Ser His
165 170 175

Ser Tyr Cys Leu His Pro Asp Met Met Arg Leu Ala Cys Ala Asp Ile
180 185 190

Ser Ile Asn Ser Ile Tyr Gly Leu Phe Val Leu Val Ser Thr Phe Gly
195 200 205

Met Asp Leu Phe Phe Ile Phe Leu Ser Tyr Val Leu Ile Leu Arg Ser
210 215 220

Val Met Ala Thr Ala Ser Arg Glu Glu Arg Leu Lys Ala Leu Asn Thr
225 230 235 240

Cys Val Ser His Ile Leu Ala Val Leu Ala Phe Tyr Val Pro Met Ile
245 250 255

Gly Val Ser Thr Val His Arg Phe Gly Lys His Val Pro Cys Tyr Ile
260 265 270

His Val Leu Met Ser Asn Val Tyr Leu Phe Val Pro Pro Val Leu Asn

275

280

285

Pro Leu Ile Tyr Ser Ala Lys Thr Lys Glu Ile Arg Arg Ala Ile Phe
 290 295 300

Arg Met Phe His His Ile Lys Ile
 305 310

<210> 266

<211> 939

<212> DNA

<213> Homo sapiens

<400> 266

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ggaaatacag tgatcctgca ggctgtgcga gtggagccca gcctccatga gcccatgtac 180
tacttcctgt ccatgttgct cttcagtgat gtggccatat ccatggccac actgcccact 240
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atgtttctta ttcacttctt ctccatgatg gaatcaggta ttctgctggc catgagtttt 360
gaccgctatg tggccatttg tgaccccttg cgctatgcaa ctgtgctcac cactgaagtc 420
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caccagaca tgatgaggct tgcctgtgct gatatcagta tcaacagcat ctatggactc 600
tttgttcttg tatccacctt tggcatggac ctgtttttta tcttctctc ctatgtgctc 660
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tgtgtgtcac atatcctggc tgtacttgca ttttatgtgc caatgattgg ggtctccaca 780
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cgagccattt tccgcatgtt tcaccacatc aaaatatga 939

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<210> 267

<211> 326

<212> PRT

<213> Homo sapiens

<400> 267

Met Ser Val Gln Tyr Ser Leu Ser Pro Gln Phe Met Leu Leu Ser Asn
 1 5 10 15

Ile Thr Gln Phe Ser Pro Ile Phe Tyr Leu Thr Ser Phe Pro Gly Leu
 20 25 30

Glu Gly Ile Lys His Trp Ile Phe Ile Pro Phe Phe Phe Met Tyr Met
 35 40 45

Val Ala Ile Ser Gly Asn Cys Phe Ile Leu Ile Ile Ile Lys Thr Asn
 50 55 60

Pro Arg Leu His Thr Pro Met Tyr Tyr Leu Leu Ser Leu Leu Ala Leu
 65 70 75 80

Thr Asp Leu Gly Leu Cys Val Ser Thr Leu Pro Thr Thr Met Gly Ile
 85 90 95

Phe Trp Phe Asn Ser Gln Ser Ile Tyr Phe Gly Ala Cys Gln Ile Gln
 100 105 110

Met Phe Cys Ile His Ser Phe Ser Phe Met Glu Ser Ser Val Leu Leu

115

120

125

Met Met Ser Phe Asp Arg Phe Val Ala Ile Cys His Pro Leu Arg Tyr
 130 135 140

Ser Val Ile Ile Thr Gly Gln Gln Val Val Arg Ala Gly Leu Ile Val
 145 150 155 160

Ile Phe Arg Gly Pro Val Ala Thr Ile Pro Ile Val Leu Leu Leu Lys
 165 170 175

Ala Phe Pro Tyr Cys Gly Ser Val Val Leu Ser His Ser Phe Cys Leu
 180 185 190

His Gln Glu Val Ile Gln Leu Ala Cys Thr Asp Thr Thr Phe Asn Asn
 195 200 205

Leu Tyr Gly Leu Met Val Val Val Phe Thr Val Met Leu Asp Leu Val
 210 215 220

Leu Ile Ala Leu Ser Tyr Gly Leu Ile Leu His Thr Val Ala Gly Leu
 225 230 235 240

Ala Ser Gln Glu Glu Gln Arg Arg Ala Phe Gln Thr Cys Thr Ala His
 245 250 255

Leu Cys Ala Val Leu Val Phe Phe Val Pro Met Met Gly Leu Ser Leu
 260 265 270

Val His Arg Phe Gly Lys His Ala Pro Pro Ala Ile His Leu Leu Met
 275 280 285

Ala Asn Val Tyr Leu Phe Val Pro Pro Met Leu Asn Pro Ile Ile Tyr
 290 295 300

Ser Ile Lys Thr Lys Glu Ile His Arg Ala Ile Ile Lys Leu Leu Gly
 305 310 315 320

Leu Lys Lys Ala Ser Lys
 325

<210> 268

<211> 981

<212> DNA

<213> Homo sapiens

<400> 268

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 atcccccttt tctttatgta catggttgcc atctcaggca attgtttcat tctgatcatt 180
 attaagacca accctcgtct gcacacaccc atgtactatc tactatcctt gctggccctc 240
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 tcccagagta tctacttttg agcgtgtcaa atccagatgt tctgcatcca ctctttttcc 360
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 cctctgaggt attcggatcat tatcactggc cagcaagtgg tcagagcagg cctaattgtc 480
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 ctggacctgg tgcctatcgc actgtcctat ggactcatcc tgcacacagt agcaggcctg 720
 gcctcccaag aggagcagcg ccgtgccttt cagacatgca ccgctcatct ctgtgctgtg 780

ctagtattct ttgtgcccac gatggggctg tccctgggtgc accgttttgg gaagcatgcc 840
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ccaatcatat acagcattaa gaccaaggag atccaccgtg ccattatcaa actcctaggt 960
cttaaaaagg ccagtaaatag a 981

<210> 269
<211> 317
<212> PRT
<213> Homo sapiens

<400> 269

Met	Ser	Gln	Val	Thr	Asn	Thr	Thr	Gln	Glu	Gly	Ile	Tyr	Phe	Ile	Leu	1	5	10	15
Thr	Asp	Ile	Pro	Gly	Phe	Glu	Ala	Ser	His	Ile	Trp	Ile	Ser	Ile	Pro	20	25	30	
Val	Cys	Cys	Leu	Tyr	Thr	Ile	Ser	Ile	Met	Gly	Asn	Thr	Thr	Ile	Leu	35	40	45	
Thr	Val	Ile	Arg	Thr	Glu	Pro	Ser	Val	His	Gln	Arg	Met	Tyr	Leu	Phe	50	55	60	
Leu	Ser	Met	Leu	Ala	Leu	Thr	Asp	Leu	Gly	Leu	Thr	Leu	Thr	Thr	Leu	65	70	75	80
Pro	Thr	Val	Met	Gln	Leu	Leu	Trp	Phe	Asn	Val	Arg	Arg	Ile	Ser	Ser	85	90	95	
Glu	Ala	Cys	Phe	Ala	Gln	Phe	Phe	Phe	Leu	His	Gly	Phe	Ser	Phe	Met	100	105	110	
Glu	Ser	Ser	Val	Leu	Leu	Ala	Met	Ser	Val	Asp	Cys	Tyr	Val	Ala	Ile	115	120	125	
Cys	Cys	Pro	Leu	His	Tyr	Ala	Ser	Ile	Leu	Thr	Asn	Glu	Val	Ile	Gly	130	135	140	
Arg	Thr	Gly	Leu	Ala	Ile	Ile	Cys	Cys	Cys	Val	Leu	Ala	Val	Leu	Pro	145	150	155	160
Ser	Leu	Phe	Leu	Leu	Lys	Arg	Leu	Pro	Phe	Cys	His	Ser	His	Leu	Leu	165	170	175	
Ser	Arg	Ser	Tyr	Cys	Leu	His	Gln	Asp	Met	Ile	Arg	Leu	Val	Cys	Ala	180	185	190	
Asp	Ile	Arg	Leu	Asn	Ser	Trp	Tyr	Gly	Phe	Ala	Leu	Ala	Leu	Leu	Ile	195	200	205	
Ile	Ile	Val	Asp	Pro	Leu	Leu	Ile	Val	Ile	Ser	Tyr	Thr	Leu	Ile	Leu	210	215	220	
Lys	Asn	Ile	Leu	Gly	Thr	Ala	Thr	Trp	Ala	Glu	Arg	Leu	Arg	Ala	Leu	225	230	235	240
Asn	Asn	Cys	Leu	Ser	His	Ile	Leu	Ala	Val	Leu	Val	Leu	Tyr	Ile	Pro	245	250	255	
Met	Val	Gly	Val	Ser	Met	Thr	His	Arg	Phe	Ala	Lys	His	Ala	Ser	Pro				

260

265

270

Leu Val His Val Ile Met Ala Asn Ile Tyr Leu Leu Ala Pro Pro Val
 275 280 285

Met Asn Pro Ile Ile Tyr Ser Val Lys Asn Lys Gln Ile Gln Trp Gly
 290 295 300

Met Leu Asn Phe Leu Ser Leu Lys Asn Met His Ser Arg
 305 310 315

<210> 270

<211> 954

<212> DNA

<213> Homo sapiens

<400> 270

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 atcatgggca ataccacat cctcactgtc attcgacag agccatctgt ccaccagcgc 180
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 tcccttttct tactcaagcg actgcctttc tgccactccc accttctctc tcgctcctat 540
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 aataactgcc tgtcccatat tctagctgtc ctggctcctc acattcccat ggttggtgta 780
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<210> 271

<211> 320

<212> PRT

<213> Homo sapiens

<400> 271

Met Pro Ser Ala Ser Ala Met Ile Ile Phe Asn Leu Ser Ser Tyr Asn
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Pro Gly Pro Phe Ile Leu Val Gly Ile Pro Gly Leu Glu Gln Phe His
 20 25 30

Val Trp Ile Gly Ile Pro Phe Cys Ile Ile Tyr Ile Val Ala Val Val
 35 40 45

Gly Asn Cys Ile Leu Leu Tyr Leu Ile Val Val Glu His Ser Leu His
 50 55 60

Glu Pro Met Phe Phe Phe Leu Ser Met Leu Ala Met Thr Asp Leu Ile
 65 70 75 80

Leu Ser Thr Ala Gly Val Pro Lys Ala Leu Ser Ile Phe Trp Leu Gly
 85 90 95

Ala Arg Glu Ile Thr Phe Pro Gly Cys Leu Thr Gln Met Phe Phe Leu

100	105	110
His Tyr Asn Phe Val Leu Asp Ser Ala Ile Leu Met Ala Met Ala Phe		
115	120	125
Asp His Tyr Val Ala Ile Cys Ser Pro Leu Arg Tyr Thr Thr Ile Leu		
130	135	140
Thr Pro Lys Thr Ile Ile Lys Ser Ala Met Gly Ile Ser Phe Arg Ser		
145	150	155 160
Phe Cys Ile Ile Leu Pro Asp Val Phe Leu Leu Thr Cys Leu Pro Phe		
165	170	175
Cys Arg Thr Arg Ile Ile Pro His Thr Tyr Cys Glu His Ile Gly Val		
180	185	190
Ala Gln Leu Ala Cys Ala Asp Ile Ser Ile Asn Phe Trp Tyr Gly Phe		
195	200	205
Cys Val Pro Ile Met Thr Val Ile Ser Asp Val Ile Leu Ile Ala Val		
210	215	220
Ser Tyr Ala His Ile Leu Cys Ala Val Phe Gly Leu Pro Ser Gln Asp		
225	230	235 240
Ala Cys Gln Lys Ala Leu Gly Thr Cys Gly Ser His Val Cys Val Ile		
245	250	255
Leu Met Phe Tyr Thr Pro Ala Phe Phe Ser Ile Leu Ala His Arg Phe		
260	265	270
Gly His Asn Val Ser Arg Thr Phe His Ile Met Phe Ala Asn Leu Tyr		
275	280	285
Ile Val Ile Pro Pro Ala Leu Asn Pro Met Val Tyr Gly Val Lys Thr		
290	295	300
Lys Gln Ile Arg Asp Lys Val Ile Leu Leu Phe Ser Lys Gly Thr Gly		
305	310	315 320

<210> 272

<211> 963

<212> DNA

<213> Homo sapiens

<400> 272

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catagtcttc	atgaacccat	gttcttcttt	ctctccatgc	tggccatgac	tgacctcatc	240
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acacctgcct tttttcccat cctcgcccat cgctttggac acaatgtctc tcgcaccttc 840
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<210> 273
<211> 318
<212> PRT
<213> Homo sapiens

<400> 273

Met	Pro	Thr	Val	Asn	His	Ser	Gly	Thr	Ser	His	Thr	Val	Phe	His	Leu	1	5	10	15
Leu	Gly	Ile	Pro	Gly	Leu	Gln	Asp	Gln	His	Met	Trp	Ile	Ser	Ile	Pro	20	25	30	
Phe	Phe	Ile	Ser	Tyr	Val	Thr	Ala	Leu	Leu	Gly	Asn	Ser	Leu	Leu	Ile	35	40	45	
Phe	Ile	Ile	Leu	Thr	Lys	Arg	Ser	Leu	His	Glu	Pro	Met	Tyr	Leu	Phe	50	55	60	
Leu	Cys	Met	Leu	Ala	Gly	Ala	Asp	Ile	Val	Leu	Ser	Thr	Cys	Thr	Ile	65	70	75	80
Pro	Gln	Ala	Leu	Ala	Ile	Phe	Trp	Phe	Arg	Ala	Gly	Asp	Ile	Ser	Leu	85	90	95	
Asp	Arg	Cys	Ile	Thr	Gln	Leu	Phe	Phe	Ile	His	Ser	Thr	Phe	Ile	Ser	100	105	110	
Glu	Ser	Gly	Ile	Leu	Leu	Val	Met	Ala	Phe	Asp	His	Tyr	Ile	Ala	Ile	115	120	125	
Cys	Tyr	Pro	Leu	Arg	Tyr	Thr	Thr	Ile	Leu	Thr	Asn	Ala	Leu	Ile	Lys	130	135	140	
Lys	Ile	Cys	Val	Thr	Val	Ser	Leu	Arg	Ser	Tyr	Gly	Thr	Ile	Phe	Pro	145	150	155	160
Ile	Ile	Phe	Leu	Leu	Lys	Arg	Leu	Thr	Phe	Cys	Gln	Asn	Asn	Ile	Ile	165	170	175	
Pro	His	Thr	Phe	Cys	Glu	His	Ile	Gly	Leu	Ala	Lys	Tyr	Ala	Cys	Asn	180	185	190	
Asp	Ile	Arg	Ile	Asn	Ile	Trp	Tyr	Gly	Phe	Ser	Ile	Leu	Met	Ser	Thr	195	200	205	
Val	Val	Leu	Asp	Val	Val	Leu	Ile	Phe	Ile	Ser	Tyr	Met	Leu	Ile	Leu	210	215	220	
His	Ala	Val	Phe	His	Met	Pro	Ser	Pro	Asp	Ala	Cys	His	Lys	Ala	Leu	225	230	235	240
Asn	Thr	Phe	Gly	Ser	His	Val	Cys	Ile	Ile	Ile	Leu	Phe	Tyr	Gly	Ser	245	250	255	
Gly	Ile	Phe	Thr	Ile	Leu	Thr	Gln	Arg	Phe	Gly	Arg	His	Ile	Pro	Pro				

260

265

270

Cys Ile His Ile Pro Leu Ala Asn Val Cys Ile Leu Ala Pro Pro Met
 275 280 285

Leu Asn Pro Ile Ile Tyr Gly Ile Lys Thr Lys Gln Ile Gln Glu Gln
 290 295 300

Val Val Gln Phe Leu Phe Ile Lys Gln Lys Ile Thr Leu Val
 305 310 315

<210> 274

<211> 957

<212> DNA

<213> Homo sapiens

<400> 274

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atccaggaac aggtggttca gtttttgttt ataaaacaga aaataacttt ggttttaa 957

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<210> 275

<211> 311

<212> PRT

<213> Homo sapiens

<400> 275

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His Ala Pro Ala Leu Asp Ala Pro Leu Phe Gly Val Phe Leu Val Val
 20 25 30

Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45

Val Asp Ser His Leu His Thr Thr Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60

Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Leu Leu
 65 70 75 80

Met Thr Leu Val Phe Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys
 85 90 95

Met Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Gly Thr Glu Cys Phe

100	105	110
Leu Tyr Arg Val Met Ser Cys Asp Arg Tyr Leu Ala Ile Ser Tyr Pro		
115	120	125
Leu Arg Tyr Thr Ser Met Met Thr Gly Arg Ser Cys Thr Leu Leu Ala		
130	135	140
Thr Ser Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Ala Ile		
145	150	155
Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Trp Ile Gln His Tyr		
165	170	175
Leu Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser		
180	185	190
Ala Ile Glu Thr Val Ile Phe Val Thr Val Gly Ile Val Ala Ser Gly		
195	200	205
Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile		
210	215	220
Leu Arg Ile Arg Thr Ser Glu Gly Lys His Arg Ala Phe Gln Thr Cys		
225	230	235
Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Gly Pro Gly Leu Phe		
245	250	255
Ile Tyr Leu Arg Pro Gly Ser Arg Lys Ala Val Asp Gly Val Val Ala		
260	265	270
Val Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr		
275	280	285
Leu Arg Asn Lys Glu Val Lys Lys Ala Leu Leu Lys Leu Lys Asp Lys		
290	295	300
Val Ala His Ser Gln Ser Lys		
305	310	

<210> 276
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 276
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 ctcctcatcc tgctggatg caggggtgat tctcacctcc acaccaccat gtactacttc 180
 ctcaccaacc tgcgtttcat tgacatgtgg ttctccactg tcacgggtgcc caaattgctg 240
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 tatttctttc acttccatag gggcaccgag tggttctctc acaggggtcat gtcctgtgat 360
 cgctacctgg ccacacagta cccgctcagg tacaccagca tgatgactgg gcgctcgtgt 420
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 ccgccccatc tgaaactggc ctgtgcagac acctcagcca tagagactgt catttttgtg 600
 actgtttgaa tagtggcctc gggctgcttt gtcctgatag tgctgtccta tgtgtccatc 660
 gtctgttcca tccctgcggat ccgcacctca gaggggaagc acagagcctt tcagacctgt 720
 gcctcccaact gtatcgtggg cctttgcttc tttggccctg gtcttttcat ttacctgagg 780

ccaggctcca ggaaagctgt ggatggagtt gtggccgttt tctacactgt gctgacgccc 840
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 ctgaaagaca aagtagcaca ttctcagagc aaatag 936

<210> 277
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 277
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 Leu Thr Gln Ser Gln Asp Gln Ser Leu Val Leu Phe Leu Phe Leu Cys
 20 25 30
 Leu Val Tyr Met Thr Thr Leu Leu Gly Asn Leu Leu Ile Met Val Thr
 35 40 45
 Val Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Arg
 50 55 60
 Asn Leu Ala Ile Leu Asp Ile Cys Phe Ser Ser Thr Thr Ala Pro Lys
 65 70 75 80
 Val Leu Leu Asp Leu Leu Ser Lys Lys Lys Thr Ile Ser Tyr Thr Ser
 85 90 95
 Cys Met Thr Gln Ile Phe Leu Phe His Leu Leu Gly Gly Ala Asp Ile
 100 105 110
 Phe Ser Leu Ser Val Met Ala Phe Asp Cys Tyr Met Ala Ile Ser Lys
 115 120 125
 Pro Leu His Tyr Val Thr Ile Met Ser Arg Gly Gln Cys Thr Ala Leu
 130 135 140
 Ile Ser Ala Ser Trp Met Gly Gly Phe Val His Ser Ile Val Gln Ile
 145 150 155 160
 Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Val Leu Lys Leu Thr Cys Thr Asp Thr
 180 185 190
 Phe Ala Leu Glu Phe Leu Met Ile Ser Asn Asn Gly Leu Val Thr Thr
 195 200 205
 Leu Trp Phe Ile Phe Leu Leu Val Ser Tyr Thr Val Ile Leu Met Thr
 210 215 220
 Leu Arg Ser Gln Ala Gly Gly Gly Arg Arg Lys Ala Ile Ser Thr Cys
 225 230 235 240
 Thr Ser Pro His His Cys Gly Asp Pro Ala Phe Cys Ala Leu His Leu
 245 250 255
 Cys Leu Cys Pro Ala Leu His Cys Pro Pro His Arg Lys Gly His Leu
 260 265 270

Cys His Leu His Cys His Leu Pro Ser Ala Glu Pro Phe Asp Leu His
 275 280 285

Ser Glu Glu Pro Gly Asn Glu Val Ser His Glu Lys Thr Glu Glu Lys
 290 295 300

Thr Arg Ala Phe
 305

<210> 278
 <211> 927
 <212> DNA
 <213> Homo sapiens

<400> 278
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 ggaaacctcc tcatcatggt caccgtgacc tgtgagtctc gccttcacac ccccatgtac 180
 ttctgtctcc gcaatctagc catccttgac atctgcttct cctccacaac tgctcctaaa 240
 gtcttgctgg accttctgtc aaagaaaaag accatatact atacaagctg catgacacag 300
 atatttctct tccacctcct tgggtggggca gacatttttt ctctctctgt gatggcgttt 360
 gactgctaca tggccatctc caagcccctg cactatgtga ccatcatgag tagagggcaa 420
 tgcactgccc tcatctctgc ctcttgatg gggggccttg tccactccat cgtgcagatc 480
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 tccaacaatg gcctgggtcac taccctgtgg tttatcttcc tgcttggtgc ctacacagtc 660
 atcctaata ga cgtgaggtc tcaggcagga gggggcagga ggaaagccat ctccacttgc 720
 acctccccc atcactgtgg tgacctgca ttttggtgcc tgcacttatg tctatgcccg 780
 gcccttcaact gccctcccca cagaaaaggc catctctgtc accttcaactg tcatctcccc 840
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 actgaagaga agactcgtgc cttctga 927

<210> 279
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 279
 Met Phe Ser Pro Asn His Thr Ile Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Leu Thr Asp Asp Pro Val Leu Glu Lys Ile Leu Phe Gly Val Phe Leu
 20 25 30
 Ala Ile Tyr Leu Ile Thr Leu Ala Gly Asn Leu Cys Met Ile Leu Leu
 35 40 45
 Ile Arg Thr Asn Ser His Leu Gln Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 His Leu Ser Phe Val Asp Ile Cys Tyr Ser Ser Asn Val Thr Pro Asn
 65 70 75 80
 Met Leu His Asn Phe Leu Ser Glu Gln Lys Thr Ile Ser Tyr Ala Gly
 85 90 95
 Cys Phe Thr Gln Cys Leu Leu Phe Ile Ala Leu Val Ile Thr Glu Phe
 100 105 110

Tyr Ile Leu Ala Ser Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125
 Pro Leu His Tyr Ser Ser Arg Met Ser Lys Asn Ile Cys Val Cys Leu
 130 135 140
 Val Thr Ile Pro Tyr Met Tyr Gly Phe Leu Ser Gly Phe Ser Gln Ser
 145 150 155 160
 Leu Leu Thr Phe His Leu Ser Phe Cys Gly Ser Leu Glu Ile Asn His
 165 170 175
 Phe Tyr Cys Ala Asp Pro Pro Leu Ile Met Leu Ala Cys Ser Asp Thr
 180 185 190
 Arg Val Lys Lys Met Ala Met Phe Val Val Ala Gly Phe Asn Leu Ser
 195 200 205
 Ser Ser Leu Phe Ile Ile Leu Leu Ser Tyr Leu Phe Ile Phe Ala Ala
 210 215 220
 Ile Phe Arg Ile Arg Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Ile Val Thr Leu Phe Tyr Gly Thr Leu Phe
 245 250 255
 Cys Met Tyr Val Arg Pro Pro Ser Glu Lys Ser Val Glu Glu Ser Lys
 260 265 270
 Ile Thr Ala Val Phe Tyr Thr Phe Leu Ser Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Thr Asp Val Ile Leu Ala Met Gln Gln Met
 290 295 300
 Ile Arg Gly Lys Ser Phe His Lys Ile Ala Val
 305 310 315

<210> 280
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 280
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 tgtcttctct tcatcgccct ggtgatcact gagttttaca tccttgcttc aatggcattg 360
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 tgtgtctgtc tggctactat cccttacatg tatgggtttc ttagtgggtt ctctcagtca 480
 ctgctaacct ttcacttata cttctgtggc tcccttgaaa tcaatcattt ctactgcgct 540
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 gtagttgcag gctttaatct ctcaagctct ctcttcatca ttcttctgtc ctatcttttc 660
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 tgtgcttccc acctgacaat agtcactttg ttttatggaa ccctcttctg catgtacgta 780
 aggctccat cagagaagtc tgtagaggag tccaaaataa ctgcagtctt ttatactttt 840

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ttgagcccaa tgctgaaccc attgatctat agcctacgga acacagatgt aatccttgcc 900
atgcaacaaa tgattagggg aaaatccttt cataaaattg cagtttag          948

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<210> 281
<211> 314
<212> PRT
<213> Homo sapiens
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<400> 281

<400> 281
Met Asp Gln Ile Asn His Thr Asn Val Lys Glu Phe Phe Phe Leu Glu
1 5 10 15

Leu Thr Arg Ser Arg Glu Leu Glu Phe Phe Leu Phe Val Val Phe Phe
20 25 30

Ala Val Tyr Val Ala Thr Val Leu Gly Asn Ala Leu Ile Val Val Thr
35 40 45

Ile Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Arg
50 55 60

Asn Lys Ser Val Leu Asp Ile Val Phe Ser Ser Ile Thr Val Pro Lys
65 70 75 80

Phe Leu Val Asp Leu Leu Ser Asp Arg Lys Thr Ile Ser Tyr Asn Asp
85 90 95

Cys Met Ala Gln Ile Phe Phe Phe His Phe Ala Gly Gly Ala Asp Ile
100 105 110

Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Ala Lys
115 120 125

Pro Leu His Tyr Val Thr Met Met Arg Lys Glu Val Trp Val Ala Leu
130 135 140

Val	Val	Ala	Ser	Trp	Val	Ser	Gly	Gly	Leu	His	Ser	Ile	Ile	Gln	Val
145					150					155					160

Ile Leu Met Leu Pro Phe Pro Phe Cys Gly Pro Asn Thr Leu Asp Ala
165 170 175

Phe Tyr Cys Tyr Val Leu Gln Val Val Lys Leu Ala Cys Thr Asp Thr
180 185 190

Phe Ala Leu Glu Leu Phe Met Ile Ser Asn Asn Gly Leu Val Thr Leu
195 200 205

Leu Trp Phe Leu Leu Leu Leu Gly Ser Tyr Thr Val Ile Leu Val Met
210 215 220

Leu Arg Ser His Ser Gly Glu Gly Arg Asn Lys Ala Leu Ser Thr Cys
225 230 235 240

Thr Ser His Met Leu Val Val Thr Leu His Phe Val Pro Cys Val Tyr
245 250 255

Ile Tyr Cys Arg Pro Phe Met Thr Leu Pro Met Asp Thr Thr Ile Ser
260 265 270

Ile Asn Asn Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser
275 280 285

Leu Arg Asn Gln Glu Met Lys Ser Ala Met Gln Arg Leu Gln Arg Arg
290 295 300

Leu Gly Pro Ser Glu Ser Arg Lys Trp Gly
305 310

<210> 282
<211> 945
<212> DNA
<213> Homo sapiens

<400> 282
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ggaaatgcac tcattgtggg cactattacc tgtgagtcct gcctacacac tcctatgtac 180
tttctcctgc ggaacaaatc agtcctggac atcgtttttt catctatcac cgtccccaag 240
ttcctgggtg atctttttatc agacaggaaa accatctcct acaatgactg catggcacag 300
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gacagatacc ttgcaatcgc caagcccctg cactatgtga ccatgatgag gaaagagggtg 420
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tctaacaacg gactggtgac cctgctctgg ttctctctgc tcctgggctc ctacactgtc 660
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acgtcccaca tgctgggtgt gactcttcac ttctgtgcct gtgtttacat ctactgccgg 780
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ctgcagagga gacttggggc ttccgagagc agaaaatggg ggtga 945

<210> 283
<211> 311
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (253)
<223> Any amino acid

<400> 283
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His Ala Pro Gly Leu Asp Ala Pro Leu Phe Gly Ile Phe Leu Val Val
20 25 30

Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
35 40 45

Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu
50 55 60

Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu
65 70 75 80

Met Thr Leu Val Ser Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys

85

90

95

Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe
 100 105 110
 Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
 115 120 125
 Leu Arg Tyr Thr Ser Met Met Ser Gly Ser Arg Cys Ala Leu Leu Ala
 130 135 140
 Thr Ser Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
 145 150 155 160
 Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
 165 170 175
 Leu Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190
 Ala Asn Glu Met Val Ile Phe Val Asp Ile Gly Leu Val Ala Ser Gly
 195 200 205
 Cys Phe Leu Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220
 Leu Arg Ile His Thr Ser Glu Gly Arg His Arg Ala Phe Gln Thr Cys
 225 230 235 240
 Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Val Xaa Cys Val Phe
 245 250 255
 Ile Tyr Leu Arg Pro Gly Ser Arg Asp Val Val Asp Gly Val Val Ala
 260 265 270
 Ile Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr
 275 280 285
 Leu Arg Asn Lys Glu Val Lys Lys Ala Val Leu Lys Leu Arg Asp Lys
 290 295 300
 Val Ala His Ser Gln Gly Glu
 305 310

<210> 284

<211> 936

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (756)..(757)

<223> a, t, c, or g

<400> 284

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 ctcaccaacc tgtccttcat tgacatgtgg ttctccactg tcacggtgcc caaaatgctg 240
 atgaccttgg tgtccccaag cggcagggct atctccttcc acagctgcgt ggctcagctc 300


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tattttttcc acttcctggg gagcaccgag tgtttcctct acacagtcac gtcctatgat 360
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gccctcctgg ccaccagcac ttggctcagt ggctctctgc actctgctgt ccagaccata 480
ttgactttcc atttgcccta ctgtggaccc aaccagatcc agcactatct gtgtgatgca 540
ccgcccaccc tgaaactggc ctgtgcagac acctcagcca acgagatggg catctttgtg 600
gacattgggc tagtggcctc gggctgcttt ctctgatag tgctgtctta tgtgtccatc 660
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gcctcccact gcatcggtgt cctttgcttt tttgtnnctt gtgttttcat ttacctgaga 780
ccaggctcca gggacgtcgt ggatggagtt gtggccattt tctacactgt gctgacaccc 840
cttctcaacc ctgttgtgta caccctgaga aacaaggagg tgaagaaagc tgtgttgaaa 900
ctgagagaca aagtagcaca ttctcagggg gaataa 936

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<210> 285

<211> 331

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (253)

<223> Any amino acid

<400> 285

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Met Cys Trp Ala Met Pro Ser Pro Phe Thr Gly Ser Ser Thr Arg Asn
  1             5             10             15

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Met Glu Ser Arg Asn Gln Ser Thr Val Thr Glu Phe Ile Phe Thr Gly
      20             25             30

```

```

Phe Pro Gln Leu Gln Asp Gly Ser Leu Leu Tyr Phe Phe Pro Leu Leu
      35             40             45

```

```

Phe Ile Tyr Thr Phe Ile Ile Ile Asp Asn Leu Leu Ile Phe Ser Ala
      50             55             60

```

```

Val Arg Leu Asp Thr His Leu Gly Asn Pro Met Tyr Asn Phe Ile Ser
      65             70             75             80

```

```

Ile Phe Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys
      85             90             95

```

```

Met Leu Ser Asn Leu Ile Ser Glu Lys Lys Ala Ile Ser Met Thr Gly
      100            105            110

```

```

Cys Ile Leu Gln Met Tyr Phe Phe His Ser Leu Glu Asn Ser Glu Gly
      115            120            125

```

```

Ile Leu Leu Thr Thr Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Asn
      130            135            140

```

```

Pro Leu Arg Tyr Gln Met Ile Met Thr Pro Arg Leu Cys Ala His Leu
      145            150            155            160

```

```

Ser Ala Gly Ser Cys Leu Phe Gly Phe Leu Ile Leu Leu Pro Glu Ile
      165            170            175

```

```

Val Met Ile Ser Thr Leu Pro Phe Cys Gly Pro Asn Gln Ile His Gln
      180            185            190

```

```

Ile Phe Cys Asp Leu Val Pro Val Leu Ser Leu Ala Cys Thr Asp Thr

```

195 200 205
 Ser Met Ile Leu Ile Glu Asp Val Ile His Ala Val Thr Ile Ile Ile
 210 215 220
 Thr Phe Leu Ile Ile Ala Leu Ser Tyr Val Arg Ile Val Thr Val Ile
 225 230 235 240
 Leu Arg Ile Pro Ser Ser Glu Gly Arg Gln Lys Ala Xaa Ser Thr Cys
 245 250 255
 Ala Gly His Leu Met Val Phe Leu Ile Phe Phe Gly Ser Val Ser Leu
 260 265 270
 Met Tyr Leu Arg Phe Ser Asn Thr Tyr Pro Pro Val Leu Asp Thr Ala
 275 280 285
 Ile Ala Leu Met Phe Thr Val Leu Ala Pro Phe Phe Asn Pro Ile Ile
 290 295 300
 Tyr Ser Leu Arg Asn Lys Asp Met Asn Asn Ala Ile Lys Lys Leu Phe
 305 310 315 320
 Cys Leu Gln Lys Val Leu Asn Lys Pro Gly Gly
 325 330

<210> 286
 <211> 996
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (757)
 <223> a, t, c, or g

<400> 286
 atgtgctggg ctatgccctc tccatattaca ggtagctcta ctagaaatat ggagagcaga 60
 aaccaatcaa cagtgactga atttatcttc actggattcc ctcagcttca ggatggtagt 120
 ctctgtact tctttccttt acttttcatc tatactttta ttatcattga taacttatta 180
 atcttctctg ctgtaaggct ggacacccat ctgggcaacc ccatgtataa ttttatcagt 240
 atattttcct ttctggagat ctgggtacacc acagccacca ttcccaagat gctctccaac 300
 ctcacagtg aaaagaaggc catctcaatg actggctgca tcttgcagat gtatttcttc 360
 cactcacttg aaaactcaga ggggatcttg ctgaccacca tggccattga cagatacgtt 420
 gccatctgca accctcttcg ctatcaaatg atcatgaccc ccggtctctg tgctcacctc 480
 tctgcagggt cctgcctctt cgggttctct atcctgcttc ccgagattgt gatgatttcc 540
 aactgcctt tctgtgggcc caaccaaata catcagatct tctgtgactt ggtccctgtg 600
 ctaagcctgg cctgtacaga cacgtccatg attctgattg aggatgtgat tcatgctgtg 660
 accatcatca ttaccttctt aatcattgac ctgtcctatg taagaattgt cactgtgata 720
 ttgaggattc cctcttctga agggaggcaa aaggctnttt ctacctgtgc aggccacctc 780
 atgggtcttc tgatattctt tggcagtgta tcatcattgt acttgcgttt cagcaacact 840
 tatccaccag ttttggacac agccattgca ctgatgttta ctgtacttgc tccattcttc 900
 aatcccatca tttatagcct gagaaacaag gacatgaaca atgcaattaa aaaactgttc 960
 tgtcttcaaa aagtgttgaa caagcctgga gggttaa 996

<210> 287
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 287

Met Ala Met Asp Asn Val Thr Ala Val Phe Gln Phe Leu Leu Ile Gly
1 5 10 15

Ile Ser Asn Tyr Pro Gln Trp Arg Asp Thr Phe Phe Thr Leu Val Leu
20 25 30

Ile Ile Tyr Leu Ser Thr Leu Leu Gly Asn Gly Phe Met Ile Phe Leu
35 40 45

Ile His Phe Asp Pro Asn Leu His Thr Pro Ile Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Phe Leu Asp Leu Cys Tyr Gly Thr Ala Ser Met Pro Gln
65 70 75 80

Ala Leu Val His Cys Phe Ser Thr His Pro Tyr Leu Ser Tyr Pro Arg
85 90 95

Cys Leu Ala Gln Thr Ser Val Ser Leu Ala Leu Ala Thr Ala Glu Cys
100 105 110

Leu Leu Leu Ala Ala Met Ala Tyr Asp Arg Val Val Ala Ile Ser Asn
115 120 125

Pro Leu Arg Tyr Ser Val Val Met Asn Gly Pro Val Cys Val Cys Leu
130 135 140

Val Ala Thr Ser Trp Gly Thr Ser Leu Val Leu Thr Ala Met Leu Ile
145 150 155 160

Leu Ser Leu Arg Leu His Phe Cys Gly Ala Asn Val Ile Asn His Phe
165 170 175

Ala Cys Glu Ile Leu Ser Leu Ile Lys Leu Thr Cys Ser Asp Thr Ser
180 185 190

Leu Asn Glu Phe Met Ile Leu Ile Thr Ser Ile Phe Thr Leu Leu Leu
195 200 205

Pro Phe Gly Phe Val Leu Leu Ser Tyr Ile Arg Ile Ala Met Ala Ile
210 215 220

Ile Arg Ile Arg Ser Leu Gln Gly Arg Leu Lys Ala Phe Thr Thr Cys
225 230 235 240

Gly Ser His Leu Thr Val Val Thr Ile Phe Tyr Gly Ser Ala Ile Ser
245 250 255

Met Tyr Met Lys Thr Gln Ser Lys Ser Ser Pro Asp Gln Asp Lys Phe
260 265 270

Ile Ser Val Phe Tyr Gly Ala Leu Thr Pro Met Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Lys Lys Asp Val Lys Arg Ala Ile Arg Lys Val Met
290 295 300

Leu Lys Arg Thr
305

<210> 288
 <211> 927
 <212> DNA
 <213> Homo sapiens

<400> 288
 atggccatgg acaatgtcac agcagtgttt cagtttctcc ttattggcat ttctaactat 60
 cctcaatgga gagacacgtt tttcacatta gtgctgataa tttacctcag cacattgttg 120
 gggaatggat ttatgatctt tcttattcac tttgacccca acctccacac tccaatctac 180
 ttcttcctta gtaacctgtc tttcttagac ctttggtatg gaacagcttc catgccccag 240
 gctttggtgc attgtttctc taccatccc tacctctctt atccccgatg tttggctcaa 300
 acgagtgtct ccttggtttt ggccacagca gagtgcctcc tactggctgc catggcctat 360
 gaccgtgtgg ttgctatcag caatcccctg cgttattcag tggttatgaa tggcccagtg 420
 tgtgtctgct tggttgctac ctcatggggg acatcacttg tgctcactgc catgctcatc 480
 ctatccctga ggcttcactt ctgtggggct aatgtcatca accattttgc ctgtgagatt 540
 ctctccctca ttaagctgac ctgttctgat accagcctca atgaatttat gatcctcatc 600
 accagtatct tcaccctgct gctaccattt gggtttgctt tcctctccta catacgaatt 660
 gctatggcta tcataaggat tcgtcactc cagggcaggc tcaaggcctt taccacatgt 720
 ggctctcacc tgaccgtggt gacaatcttc tatgggtcag ccatctccat gtatatgaaa 780
 actcagtcca agtcctcccc tgaccaggac aagtttatct cagtgtttta tggagctttg 840
 acacccatgt tgaacccctt gatatatagc ctgagaaaaa aagatgttaa acgggcaata 900
 aggaaagtta tgttgaaaag gacatga 927

<210> 289
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Lys Ala Gly Asn Phe Ser Asp Thr Pro Glu Phe Phe Leu Leu Gly
 1 5 10 15
 Leu Ser Gly Asp Pro Glu Leu Gln Pro Ile Leu Phe Met Leu Phe Leu
 20 25 30
 Ser Met Tyr Leu Ala Thr Met Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45
 Val Asn Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60
 Ile Leu Ser Leu Val Asp Ile Cys Phe Thr Ser Thr Thr Met Pro Lys
 65 70 75 80
 Met Leu Val Asn Ile Gln Ala Gln Ala Gln Ser Ile Asn Tyr Thr Gly
 85 90 95
 Cys Leu Thr Gln Ile Cys Phe Val Leu Val Phe Val Gly Leu Glu Asn
 100 105 110
 Gly Ile Leu Val Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
 115 120 125
 Pro Leu Arg Tyr Asn Val Ile Met Asn Pro Lys Leu Cys Gly Leu Leu
 130 135 140
 Leu Leu Leu Ser Phe Ile Val Ser Val Leu Asp Ala Leu Leu His Thr
 145 150 155 160

Leu Met Val Leu Gln Leu Thr Phe Cys Ile Asp Leu Glu Ile Pro His
 165 170 175
 Phe Phe Cys Glu Leu Ala His Ile Leu Lys Leu Ala Cys Ser Asp Val
 180 185 190
 Leu Ile Asn Asn Ile Leu Val Tyr Leu Val Thr Ser Leu Leu Gly Val
 195 200 205
 Val Pro Leu Ser Gly Ile Ile Phe Ser Tyr Thr Arg Ile Val Ser Ser
 210 215 220
 Val Met Lys Ile Pro Ser Ala Gly Gly Lys Tyr Lys Ala Phe Ser Ile
 225 230 235 240
 Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Gly Phe
 245 250 255
 Gly Val Tyr Leu Ser Ser Gly Ala Thr His Ser Ser Arg Lys Gly Ala
 260 265 270
 Ile Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Met Leu Lys Ala Leu Arg Lys Leu
 290 295 300
 Ile Ser Arg Ile Pro Ser Phe His
 305 310

<210> 290
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 290
 atgaaagcag gaaactttctc agacactcca gaattctttc tcttgggatt gtcaggggat 60
 ccggagctgc agcccatcct cttcatgctg ttcctgtcca tgtacctggc cacaatgctg 120
 gggaacctgc tcatcatcct ggccgtcaac tctgactccc acctccacac ccccatgtac 180
 ttctcctctc ctatcctgtc cttgggtcgac atctgtttca cctccaccac gatgcccaag 240
 atgctggtga acatccaggc acaggctcaa tccatcaatt acacaggctg cctcacccaa 300
 atctgctttg tcttggtttt tgttggattg gaaaatggaa ttctgggtcat gatggcctat 360
 gatcgatttg tggccatctg tcacccactg aggtacaatg tcatcatgaa ccccaaactc 420
 tgtgggctgc tgcttctgct gtcttccatc gttagtgtcc tggatgctct gctgcacacg 480
 ttgatggtgc tacagctgac cttctgcata gacctggaaa ttccccactt tttctgtgaa 540
 ctagctcata ttctcaagct cgctgttct gatgtcctca tcaataacat cctggtgtat 600
 ttggtgacca gcctgttagg tgttgttcct ctctctggga tcattttctc ttacacacga 660
 attgtctcct ctgtcatgaa aattccatca gctggtggaa agtataaagc tttttccatc 720
 tgccgggtcac atttaatcgt tgtttccttg ttttatggaa cagggttttg ggtgtacctt 780
 agttctgggg ctaccactc ctccaggaag ggtgcaatag catcagtgat gtataccgtg 840
 gtcaccccca tgctgaacct actcatttac agcctgagaa acaaggacat gttgaaggct 900
 ttgaggaaac taatatctag gataccatct ttccattga 939

<210> 291
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 291

Met Gly Pro Arg Asn Gln Thr Ala Val Ser Glu Phe Leu Leu Met Lys
1 5 10 15

Val Thr Glu Asp Pro Glu Leu Lys Leu Ile Pro Phe Ser Leu Phe Leu
20 25 30

Ser Met Tyr Leu Val Thr Ile Leu Gly Asn Leu Leu Ile Leu Leu Ala
35 40 45

Val Ile Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Phe
50 55 60

Asn Leu Ser Phe Thr Asp Ile Cys Leu Thr Thr Thr Thr Val Pro Lys
65 70 75 80

Ile Leu Val Asn Ile Gln Ala Gln Asn Gln Ser Ile Thr Tyr Thr Gly
85 90 95

Cys Leu Thr Gln Ile Cys Leu Val Leu Val Phe Ala Gly Leu Glu Ser
100 105 110

Cys Phe Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Arg Tyr Thr Val Leu Met Asn Val His Phe Trp Gly Leu Leu
130 135 140

Ile Leu Leu Ser Met Phe Met Ser Thr Met Asp Ala Leu Val Gln Ser
145 150 155 160

Leu Met Val Leu Gln Leu Ser Phe Cys Lys Asn Val Glu Ile Pro Leu
165 170 175

Phe Phe Cys Glu Val Val Gln Val Ile Lys Leu Ala Cys Ser Asp Thr
180 185 190

Leu Ile Asn Asn Ile Leu Ile Tyr Phe Ala Ser Ser Val Phe Gly Ala
195 200 205

Ile Pro Leu Ser Gly Ile Ile Phe Ser Tyr Ser Gln Ile Val Thr Ser
210 215 220

Val Leu Arg Met Pro Ser Ala Arg Gly Lys Tyr Lys Ala Phe Ser Thr
225 230 235 240

Cys Gly Cys His Leu Ser Val Phe Ser Leu Phe Tyr Gly Thr Ala Phe
245 250 255

Gly Val Tyr Ile Ser Ser Ala Val Ala Glu Ser Ser Arg Ile Thr Ala
260 265 270

Val Ala Ser Val Met Tyr Thr Val Val Pro Gln Met Met Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Met Lys Lys Ala Leu Arg Lys Leu
290 295 300

Ile Gly Arg Leu Phe Pro Phe
305 310

<210> 292
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 292
 atgggaccca gaaaccaaac agctgtttca gaattttcttc tcatgaaagt gacagaggac 60
 ccagaactga agttaatccc ttccagcctg ttccctgtcca tgtacctggt caccatcctg 120
 gggaacctgc tcattctcct ggctgtcatc tctgactccc acctccacac ccccatgtac 180
 ttcccttctct ttaatctctc ctttactgac atctgtttta ccacaaccac agtcccaaag 240
 atcctagtga acatccaagc tcagaatcag agtatcactt acacaggctg cctcaccag 300
 atctgtcctt tcttggtttt tgctggcttg gaaagttgct ttcttgcatg catggcctac 360
 gaccgctatg tggccatttg ccacccactg aggtacacag tccatcatgaa tgtccatttc 420
 tggggcttgc tgattcttct ctccatgttc atgagcacta tggatgccct gggtcagagt 480
 ctgatggtat tgcagctgtc cttctgcaaa aacggtgaaa tccctttgtt cttctgtgaa 540
 gtcgttcagg tcatcaagct cgctgtttct gacaccctca tcaacaacat cctcatatat 600
 tttgcaagta gtgtatttgg tgcaattcct ctctctggaa taattttctc ttattctcaa 660
 atagtcacct ctgttctgag aatgccatca gcaagaggaa agtataaagc gttttccacc 720
 tgtggctgtc acctctctgt tttttccttg ttctatggga cagcttttgg ggtgtacatt 780
 agttctgctg ttgctgagtc ttcccgaatt actgctgtgg cttcagtgat gtacactgtg 840
 gtccttcaaa tgatgaacct cttcatctac agcctgagaa ataaggagat gaagaaagct 900
 ttgaggaaac ttattggtag gctgtttcct ttttag 936

<210> 293
 <211> 345
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Pro Met Gln Leu Leu Thr Asp Phe Ile Ile Phe Ser Ile Arg
 1 5 10 15
 Phe Ile Ile Asn Ser Met Glu Ala Arg Asn Gln Thr Ala Ile Ser Lys
 20 25 30
 Phe Leu Leu Leu Gly Leu Ile Glu Asp Pro Glu Leu Gln Pro Val Leu
 35 40 45
 Phe Ser Leu Phe Leu Ser Met Tyr Leu Val Thr Ile Leu Gly Asn Leu
 50 55 60
 Leu Ile Leu Leu Ala Val Ile Ser Asp Ser His Leu His Thr Pro Met
 65 70 75 80
 Tyr Phe Phe Leu Ser Asn Leu Ser Phe Leu Asp Ile Cys Leu Ser Thr
 85 90 95
 Thr Thr Ile Pro Lys Met Leu Val Asn Ile Gln Ala Gln Asn Arg Ser
 100 105 110
 Ile Thr Tyr Ser Gly Cys Leu Thr Gln Ile Cys Phe Val Leu Phe Phe
 115 120 125
 Ala Gly Leu Glu Asn Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr
 130 135 140
 Val Ala Ile Cys His Pro Leu Arg Tyr Thr Val Ile Met Asn Pro Arg
 145 150 155 160

Leu Cys Gly Leu Leu Ile Leu Leu Ser Leu Leu Thr Ser Val Val Asn
 165 170 175
 Ala Leu Leu Leu Ser Leu Met Val Leu Arg Leu Ser Phe Cys Thr Asp
 180 185 190
 Leu Glu Ile Pro Leu Phe Phe Cys Glu Leu Ala Gln Val Ile Gln Leu
 195 200 205
 Thr Cys Ser Asp Thr Leu Ile Asn Asn Ile Leu Ile Tyr Phe Ala Ala
 210 215 220
 Cys Ile Phe Gly Gly Val Pro Leu Ser Gly Ile Ile Leu Ser Tyr Thr
 225 230 235 240
 Gln Ile Thr Ser Cys Val Leu Arg Met Pro Ser Ala Ser Gly Lys His
 245 250 255
 Lys Ala Val Ser Thr Cys Gly Ser His Leu Ser Ile Val Leu Leu Phe
 260 265 270
 Tyr Gly Ala Gly Leu Gly Val Tyr Ile Ser Ser Val Val Thr Asp Ser
 275 280 285
 Pro Arg Lys Thr Ala Val Ala Ser Val Met Tyr Ser Val Phe Pro Gln
 290 295 300
 Met Val Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Gly
 305 310 315 320
 Thr Leu Arg Lys Phe Ile Gly Arg Ile Pro Ser Leu Leu Trp Cys Ala
 325 330 335
 Ile Cys Phe Gly Phe Arg Phe Leu Glu
 340 345

<210> 294
 <211> 1038
 <212> DNA
 <213> Homo sapiens

<400> 294
 atgccgatgc agctgctgct tacagatddd attatctddd ccatcagatt catcatcaac 60
 agcatggaag cgagaaaacca aacagctatt tcaaaattcc ttctcctggg actgatagag 120
 gatccggaac tgcagcccgt ccttttcagc ctgttcctgt ccatgtactt gggtcaccatc 180
 ctggggaacc tgctcatcct cttggctgtc atctctgact ctcacctcca caccatcatg 240
 tacttcttcc tctccaatct ctcttttttg gacatttgtt taagcacaac cacgatccca 300
 aagatgctgg tgaacatcca agctcagaat cggagcatca cgtactcagg ctgcctcacc 360
 cagatctgct ttgtcttgtt ttttgctggc ttggaaaatt gtctccttgc agcaatggcc 420
 tatgaccgct atgtggccat ttgtcaccct cttagatata cagtcacatc gaaccccgcc 480
 ctctgtggcc tgctgattct tctctctctg ttgactagtg ttgtgaatgc ccttcttctc 540
 agcctgatgg tgttgaggct gtcttctctg acagacctgg aaatcccgt cttcttctgt 600
 gaactggctc aggtcatcca actcacctgt tcagacaccc tcatcaataa catcctgata 660
 tattttgcag cttgcatatt tgggtggtgt cctctgtctg gaatcatttt gtcttacact 720
 cagatcacct cctgtgtttt gagaatgcc aagcaagtg gaaagcaca agcagtttcc 780
 acctgtgggt ctcacctctc cattgttctc ttgttctatg gggcagggtt gggggtgtac 840
 attagttctg tggttactga ctcacctagg aagactgcag tggcttcagt gatgtattct 900
 gtgttccctc aaatgggtgaa cccctttatc tatagtctga ggaataagga catgaaagga 960
 accttgagga agttcatagg gaggatacct tctcttctgt ggtgtgccat ttgctttgga 1020
 ttcaggtttc tagagtaa 1038

<210> 295
<211> 313
<212> PRT
<213> Homo sapiens

<400> 295
Met Glu Pro Arg Asn Gln Thr Ser Ala Ser Gln Phe Ile Leu Leu Gly
1 5 10 15
Leu Ser Glu Lys Pro Glu Gln Glu Thr Leu Leu Phe Ser Leu Phe Phe
20 25 30
Cys Met Tyr Leu Val Met Val Val Gly Asn Leu Leu Ile Ile Leu Ala
35 40 45
Ile Ser Ile Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ala
50 55 60
Asn Leu Ser Leu Val Asp Phe Cys Leu Ala Thr Asn Thr Ile Pro Lys
65 70 75 80
Met Leu Val Ser Leu Gln Thr Gly Ser Lys Ala Ile Ser Tyr Pro Cys
85 90 95
Cys Leu Ile Gln Met Tyr Phe Phe His Phe Phe Gly Ile Val Asp Ser
100 105 110
Val Ile Ile Ala Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
115 120 125
Pro Leu His Tyr Ala Lys Ile Met Ser Leu Arg Leu Cys Arg Leu Leu
130 135 140
Val Gly Ala Leu Trp Ala Phe Ser Cys Phe Ile Ser Leu Thr His Ile
145 150 155 160
Leu Leu Met Ala Arg Leu Val Phe Cys Gly Ser His Glu Val Pro His
165 170 175
Tyr Phe Cys Asp Leu Thr Pro Ile Leu Arg Leu Ser Cys Thr Asp Thr
180 185 190
Ser Val Asn Arg Ile Phe Ile Leu Ile Val Ala Gly Met Val Ile Ala
195 200 205
Thr Pro Phe Val Cys Ile Leu Ala Ser Tyr Ala Arg Ile Leu Val Ala
210 215 220
Ile Met Lys Val Pro Ser Ala Gly Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240
Cys Ser Ser His Leu Ser Val Val Ala Leu Phe Tyr Gly Thr Thr Ile
245 250 255
Gly Val Tyr Leu Cys Pro Ser Ser Val Leu Thr Thr Val Lys Glu Lys
260 265 270
Ala Ser Ala Val Met Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Leu Lys Gly Ala Leu Arg Lys Leu
290 295 300

Val Asn Arg Lys Ile Thr Ser Ser Ser
305 310

<210> 296
<211> 942
<212> DNA
<213> Homo sapiens

<400> 296
atggaaccaa gaaaccaaac cagtgcacat caattcatcc tcctggggact ctcagaaaag 60
ccagagcagg agacgcttct cttttccctg ttcttctgca tgtacctggt catggctcgtg 120
gggaacctgc tcatcatcct ggccatcagc atagactccc acctccacac ccccatgtac 180
ttcttcctgg ccaacctgtc cctgggtgat ttctgtctgg ccaccaacac catccctaag 240
atgctggtga gccttcaaac cgggagcaag gccatctctt atccctgctg cctgatccag 300
atgtacttct tccatttctt tggcatcgtg gacagcgtca taatcgccat gatggcttat 360
gaccgggttcg tggccatctg ccacccattg cactacgcc aagatcatgag cctacgcctc 420
tgtcgccctg tggctggcgc cctctgggag ttttccctg tcatctcact cactcacatc 480
ctcctgatgg cccgtctcgt tttctgcggc agccatgagg tgcctcacta cttctgcgac 540
ctcactccca tcctccgact ttcgtgcacg gacacctctg tgaataggat cttcatcctc 600
attgtggcag ggatggtgat agccacgccc tttgtctgca tcctggcctc ctatgctcgc 660
atccttgtgg ccatcatgaa ggtccctctc gcaggcggca ggaagaaagc cttctccacc 720
tgcagctccc acctgtctgt ggttgcctct ttctatggga ccaccattgg cgtctatctg 780
tgtccctcct cggctctcac cactgtgaag gagaaagctt ctgcggtgat gtacacagca 840
gtcaccacca tgctgaatcc cttcatctac agcttgagga acagagacct gaaaggggct 900
ctcaggaagc tggtaacag aaagatcacc tcattcttct ga 942

<210> 297
<211> 317
<212> PRT
<213> Homo sapiens

<400> 297
Met Met Arg Leu Met Lys Glu Val Arg Gly Arg Asn Gln Thr Glu Val
1 5 10 15
Thr Glu Phe Leu Leu Leu Gly Leu Ser Asp Asn Pro Asp Leu Gln Gly
20 25 30
Val Leu Phe Ala Leu Phe Leu Leu Ile Tyr Met Ala Asn Met Val Gly
35 40 45
Asn Leu Gly Met Ile Val Leu Ile Lys Ile Asp Leu Cys Leu His Thr
50 55 60
Pro Met Tyr Phe Phe Leu Ser Ser Leu Ser Phe Val Asp Ala Ser Tyr
65 70 75 80
Ser Ser Ser Val Thr Pro Lys Met Leu Val Asn Leu Met Ala Glu Asn
85 90 95
Lys Ala Ile Ser Phe His Gly Cys Ala Ala Gln Phe Tyr Phe Phe Gly
100 105 110
Ser Phe Leu Gly Thr Glu Cys Phe Leu Leu Ala Met Met Ala Tyr Asp
115 120 125

Arg Tyr Ala Ala Ile Trp Asn Pro Leu Leu Tyr Pro Val Leu Val Ser
130 135 140

Gly Arg Ile Cys Phe Leu Leu Ile Ala Thr Ser Phe Leu Ala Gly Cys
145 150 155 160

Gly Asn Ala Ala Ile His Thr Gly Met Thr Phe Arg Leu Ser Phe Cys
165 170 175

Gly Ser Asn Arg Ile Asn His Phe Tyr Cys Asp Thr Pro Pro Leu Leu
180 185 190

Lys Leu Ser Cys Ser Asp Thr His Phe Asn Gly Ile Val Ile Met Ala
195 200 205

Phe Ser Ser Phe Ile Val Ile Ser Cys Val Met Ile Val Leu Ile Ser
210 215 220

Tyr Leu Cys Ile Phe Ile Ala Val Leu Lys Met Pro Ser Leu Glu Gly
225 230 235 240

Arg His Lys Ala Phe Ser Thr Cys Ala Ser Tyr Leu Met Ala Val Thr
245 250 255

Ile Phe Phe Gly Thr Ile Leu Phe Met Tyr Leu Arg Pro Thr Ser Ser
260 265 270

Tyr Ser Met Glu Gln Asp Lys Val Val Ser Val Phe Tyr Thr Val Ile
275 280 285

Ile Pro Val Leu Asn Pro Leu Ile Tyr Ser Leu Lys Asn Lys Asp Val
290 295 300

Lys Lys Ala Leu Lys Lys Ile Leu Trp Lys His Ile Leu
305 310 315

<210> 298

<211> 954

<212> DNA

<213> Homo sapiens

<400> 298

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atctatatgg caaacatggg gggcaatttg gggatgattg tattgattaa gattgatctc 180
tgtctccaca ccccatgta tttctttctc agtagcctct cttttgtaga tgctctttac 240
tcttcttccg tcaactccaa gatgctggtg aacctcatgg ctgagaataa ggccatttct 300
tttcatggat gtgctgcccc gttctacttc tttggctcct tctggggac tgagtgttc 360
ctgttgccca tgatggcata tgaccgctat gcagccattt ggaaccccct gctctaccca 420
gttctcgtgt ctgggagaat ttgctttttg ctaatagcta cctccttctt agcagggttg 480
ggaaatgcag ccatacatac agggatgact tttaggttgt ccttttgtgg ttctaataagg 540
atcaaccatt tctactgtga cccccgccca ctgctcaaac tctcttgctc tgatacccac 600
ttcaatggca ttgtgatcat ggcattctca agttttattg tcatcagctg tgttatgatt 660
gtcctcattt cctacctgtg tatcttcatt gccgtcttga agatgccttc gtttagagggc 720
aggcacaaag ccttctccac ctgtgcctct tacctcatgg ctgtcaccat attctttgga 780
acaatcctct tcatgtactt gcgcctaca tctagctact caatggagca agacaaggtt 840
gtctctgtct tttatacagt aataatccct gtgctaaatc ccctcatcta tagtttaaaa 900
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<210> 299
<211> 305
<212> PRT
<213> Homo sapiens

<400> 299
Met Gln Arg Ser Asn His Thr Val Thr Glu Phe Ile Leu Leu Gly Phe
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Thr Thr Asp Pro Gly Met Gln Leu Gly Leu Phe Val Val Phe Leu Gly
20 25 30
Val Tyr Ser Leu Thr Val Val Gly Asn Ser Thr Leu Ile Val Leu Ile
35 40 45
Cys Asn Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Thr Gly Asn
50 55 60
Leu Ser Phe Leu Asp Leu Trp Tyr Ser Ser Val Tyr Thr Pro Lys Ile
65 70 75 80
Leu Val Thr Cys Ile Ser Glu Asp Lys Ser Ile Ser Phe Ala Gly Cys
85 90 95
Leu Cys Gln Phe Phe Phe Ser Ala Gly Leu Ala Tyr Ser Glu Cys Tyr
100 105 110
Leu Leu Ala Ala Val Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro
115 120 125
Leu Leu Tyr Ala Gln Ala Met Ser Ile Lys Leu Cys Ala Leu Leu Val
130 135 140
Ala Val Ser Tyr Cys Gly Gly Phe Ile Asn Ser Ser Ile Ile Thr Lys
145 150 155 160
Lys Thr Phe Ser Phe Asn Phe Cys Arg Glu Asn Ile Ile Asp Asp Phe
165 170 175
Phe Cys Asp Leu Leu Pro Leu Val Glu Leu Ala Cys Gly Glu Lys Gly
180 185 190
Gly Tyr Lys Ile Met Met Tyr Phe Leu Leu Ala Ser Asn Val Ile Cys
195 200 205
Pro Ala Val Leu Ile Leu Ala Ser Tyr Leu Phe Ile Ile Thr Ser Val
210 215 220
Leu Arg Ile Ser Ser Ser Lys Gly Tyr Leu Lys Ala Phe Ser Thr Cys
225 230 235 240
Ser Ser His Leu Thr Ser Val Thr Leu Tyr Tyr Gly Ser Ile Leu Tyr
245 250 255
Ile Tyr Ala Leu Pro Arg Ser Ser Tyr Ser Phe Asp Met Asp Lys Ile
260 265 270
Val Ser Thr Phe Tyr Thr Val Val Phe Pro Met Leu Asn Leu Met Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Leu Leu
 290 295 300

Pro
 305

<210> 300
 <211> 918
 <212> DNA
 <213> Homo sapiens

<400> 300
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 aatagcacc tcatacgtgt gatctgtaat gactcctgcc tccacacacc catgtatttt 180
 ttcactggaa atctgtcgtt tctggatctc tgggtattct ctgtctacac cccaaagatc 240
 ctagtgacct gcatactctga agacaaaagc atctcctttg ctggctgcct gtgtcagttc 300
 ttcttctctg cagggctggc ctatagtgag tgctacctgc tggctgccgt ggcttatgac 360
 cgctacgtgg ccatctccaa gcccctgctt tatgcccagg ccatgtccat aaagctgtgt 420
 gcattgctgg tagcagctctc atattgtggt ggctttatta actcttcaat catcaccaag 480
 aaaacgtttt cctttaactt ctgccgtgaa aacatcattg atgacttttt ctgtgatttg 540
 cttcccttgg tggagctggc ctgtggcgag aagggcggct ataaaattat gatgtacttc 600
 ctgctggcct ccaatgtcat ctgcccgcga gtgctcatcc tggcctccta cctctttatc 660
 atcaccagtg tcttgaggat ctctctctcc aagggctacc tcaaagcctt ctccacatgc 720
 tcctcccacc tgacctctgt cactttatac tatggctcca ttctctacat ctacgctctc 780
 cccagatcta gctattcttt tgatatggac aaaatagttt ctacatttta cactgtggta 840
 ttccccatgt tgaatctcat gatctacagc ctaaggaata aggatgtgaa agaggctctg 900
 aaaaaacttc tcccataa 918

<210> 301
 <211> 328
 <212> PRT
 <213> Homo sapiens

<400> 301
 Met Phe Leu Thr Glu Arg Asn Thr Thr Ser Glu Ala Thr Phe Thr Leu
 1 5 10 15
 Leu Gly Phe Ser Asp Tyr Leu Glu Leu Gln Ile Pro Leu Phe Phe Val
 20 25 30
 Phe Leu Ala Val Tyr Gly Phe Ser Val Val Gly Asn Leu Gly Met Ile
 35 40 45
 Val Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe
 50 55 60
 Leu Asn His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala
 65 70 75 80
 Pro Met Met Leu Val Asn Leu Val Val Glu Asp Arg Thr Ile Ser Phe
 85 90 95
 Ser Gly Cys Leu Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr
 100 105 110
 Glu Leu Ile Leu Phe Ala Val Met Ala Tyr Asp His Phe Val Ala Ile
 115 120 125

Cys Asn Pro Leu Leu Tyr Thr Val Ala Ile Ser Gln Lys Leu Cys Ala
 130 135 140
 Met Leu Val Val Val Leu Tyr Ala Trp Gly Val Ala Cys Ser Leu Thr
 145 150 155 160
 Leu Ala Cys Ser Ala Leu Lys Leu Ser Phe His Gly Phe Asn Thr Ile
 165 170 175
 Asn His Phe Phe Cys Glu Leu Ser Ser Leu Ile Ser Leu Ser Tyr Pro
 180 185 190
 Asp Ser Tyr Leu Ser Gln Leu Leu Leu Phe Thr Val Ala Thr Phe Asn
 195 200 205
 Glu Ile Ser Thr Leu Leu Ile Ile Leu Thr Ser Tyr Ala Phe Ile Ile
 210 215 220
 Val Thr Thr Leu Lys Met Pro Ser Ala Ser Gly His Arg Lys Val Phe
 225 230 235 240
 Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
 245 250 255
 Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr
 260 265 270
 Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Leu Leu Asn
 275 280 285
 Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Ile Arg
 290 295 300
 Lys Ile Ile Asn Thr Lys Tyr Phe His Ile Lys His Arg His Trp Tyr
 305 310 315 320
 Pro Phe Asn Phe Val Ile Glu Gln
 325

<210> 302
 <211> 987
 <212> DNA
 <213> Homo sapiens

<400> 302
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 gattacctgg aactgcaaat tccccctctt tttgtatttc tggcagtcta cggcttcagt 120
 gtggtaggga atcttgggat gatagtgatc atcaaaatta acccaaaatt gcataccccc 180
 atgtattttt tcctcaacca cctctccttt gtggatttct gctattcctc catcattgct 240
 cccatgatgc tgggtgaacct ggttgtagaa gatagaacca ttccattctc aggatgtttg 300
 gtgcaattct ttttcttttg cacccttgta gtgactgaat taattctatt tgcggtgatg 360
 gcctatgacc actttgtggc catttgcaat cctctgctct acacagttgc catctcccag 420
 aaactctgtg ccatgctggt ggttgtattg tatgcatggg gagtcgcatg ttccctgaca 480
 ctgcgctgct ctgctttaaa gttatctttt catgggttca acacaatcaa tcatttcttc 540
 tgtgagttat cctccctgat atcaactctt taccctgact cttatctcag ccagttgctt 600
 cttttcactg ttgccacttt taatgagata agcacactac tcatcattct gacatcttat 660
 gcattcatca ttgtcaccac cttgaagatg ccttcagcca gtgggcaccg caaagtcctc 720
 tccacctgtg cctcccacct gactgccatc accatcttcc atggcaccat cctcttcctc 780
 tactgtgtac ccaactccaa aaactccagg cacacagtca aagtggcctc tgtgttttac 840
 accgtggtga tccccctgtt gaatccccctg atctacagtc tgagaaataa agatgttaag 900

gatgcaatcc gaaaaataat caatacaaaa tattttcata ttaaacatag gcattgggat 960
ccatttaatt ttgttattga acaataa 987

<210> 303
<211> 324
<212> PRT
<213> Homo sapiens

<400> 303
Met Ala Val Gly Arg Asn Asn Thr Ile Val Thr Lys Phe Ile Leu Leu
1 5 10 15
Gly Leu Ser Asp His Pro Gln Met Lys Ile Phe Leu Phe Met Leu Phe
20 25 30
Leu Gly Leu Tyr Leu Leu Thr Leu Ala Trp Asn Leu Ser Leu Ile Ala
35 40 45
Leu Ile Lys Met Asp Ser His Leu His Met Pro Met Tyr Phe Phe Leu
50 55 60
Ser Asn Leu Ser Phe Leu Asp Ile Cys Tyr Val Ser Ser Thr Ala Pro
65 70 75 80
Lys Met Leu Ser Asp Ile Ile Thr Glu Gln Lys Thr Ile Ser Phe Val
85 90 95
Gly Cys Ala Thr Gln Tyr Phe Val Phe Cys Gly Met Gly Leu Thr Glu
100 105 110
Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys
115 120 125
Asn Pro Leu Leu Tyr Thr Val Leu Ile Ser His Thr Leu Cys Leu Lys
130 135 140
Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Phe Ile Glu
145 150 155 160
Thr Tyr Ser Val Tyr Gln His Asp Phe Cys Gly Pro Tyr Met Ile Asn
165 170 175
His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys Ser Asp
180 185 190
Thr Phe Thr Ser Glu Val Val Thr Phe Ile Val Ser Val Val Val Gly
195 200 205
Ile Val Ser Val Leu Val Val Leu Ile Ser Tyr Gly Tyr Ile Val Ala
210 215 220
Ala Val Val Lys Ile Ser Ser Ala Thr Gly Arg Thr Lys Ala Phe Ser
225 230 235 240
Thr Cys Ala Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ser Gly
245 250 255
Phe Phe Met Tyr Met Arg Pro Ser Ser Ser Tyr Ser Leu Asn Arg Asp
260 265 270

Lys Val Val Ser Ile Phe Tyr Ala Leu Val Ile Pro Val Val Asn Pro
 275 280 285

Ile Ile Tyr Ser Phe Arg Asn Lys Glu Ile Lys Asn Ala Met Arg Lys
 290 295 300

Ala Met Glu Arg Asp Pro Gly Ile Ser His Gly Gly Pro Phe Ile Phe
 305 310 315 320

Met Thr Leu Gly

<210> 304
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 304
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 catcctcaaa tgaagatttt ccttttcatg ttatttctgg ggctctacct cctgacgttg 120
 gcctggaact taagcctcat tgccctcatt aagatggact ctcacctgca catgcccattg 180
 tacttcttcc tcagtaacct gtccttctctg gacatctgct atgtgtcctc caccgcccct 240
 aagatgctgt ctgacatcat cacagagcag aaaaccattt cctttgttgg ctgtgccact 300
 cagtactttg tcttctgtgg gatggggctg actgaatgct ttctcctggc agctatggcc 360
 tatgaccggg atgctgcaat ctgcaacccc ttgctttaca cagtccctcat atcccataca 420
 ctttgtttaa agatgggtgg ttggcgctat gtgggtggat tccttagttc tttcattgaa 480
 acatactctg tctatcagca tgatttctgt gggccctata tgatcaacca ctttttctgt 540
 gacctccctc cagtccctggc tctgtcctgc tctgatacct tcaccagcga ggtgggtgacc 600
 ttcatagtca gtgttgctgt tggaatagt tctgtgctag tggctcctcat ctcttatggt 660
 tacattgttg ctgctgttgg gaagatcagc tcagctacag gtaggacaaa ggccttcagc 720
 acttgtgcct ctcacctgac tgctgtgacc ctcttctatg gttctggatt ctctatgtac 780
 atgcgaccca gttccagcta ctccctaacc agggacaagg tgggtgtccat attctatgcc 840
 ttggtgatcc ccgtgggtgaa tcccatcatc tacagtttta ggaataagga gattaaaaat 900
 gccatgagga aagccatgga aagggaacccc gggatttctc acggtggacc attcattttt 960
 atgaccttgg gctaa 975

<210> 305
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 305
 Met Glu Met Glu Asn Cys Thr Arg Val Lys Glu Phe Ile Phe Leu Gly
 1 5 10 15
 Leu Thr Gln Asn Arg Glu Val Ser Leu Val Leu Phe Leu Phe Leu Leu
 20 25 30
 Leu Val Tyr Val Thr Thr Leu Leu Gly Asn Leu Leu Ile Met Val Thr
 35 40 45
 Val Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu His
 50 55 60
 Asn Leu Ser Ile Ala Asp Ile Cys Phe Ser Ser Ile Thr Val Pro Lys
 65 70 75 80
 Val Leu Val Asp Leu Leu Ser Glu Arg Lys Thr Ile Ser Phe Asn His
 85 90 95

Cys Phe Thr Gln Met Phe Leu Phe His Leu Ile Gly Gly Val Asp Val
 100 105 110
 Phe Ser Leu Ser Val Met Ala Leu Asp Arg Tyr Val Ala Ile Ser Lys
 115 120 125
 Pro Leu His Tyr Ala Thr Ile Met Ser Arg Asp His Cys Ile Gly Leu
 130 135 140
 Thr Val Ala Ala Trp Leu Gly Gly Phe Val His Ser Ile Val Gln Ile
 145 150 155 160
 Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr
 165 170 175
 Phe Tyr Cys Asp Val His Arg Val Leu Lys Leu Ala His Thr Asp Ile
 180 185 190
 Phe Ile Leu Glu Leu Leu Met Ile Ser Asn Asn Gly Leu Leu Thr Thr
 195 200 205
 Leu Trp Phe Phe Leu Leu Leu Val Ser Tyr Ile Val Ile Leu Ser Leu
 210 215 220
 Pro Lys Ser Gln Ala Gly Glu Gly Arg Arg Lys Ala Ile Ser Thr Cys
 225 230 235 240
 Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr
 245 250 255
 Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Met Asp Lys Ala Ile Ser
 260 265 270
 Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Leu Ile Tyr Thr
 275 280 285
 Leu Arg Asn His Glu Met Lys Ser Ala Met Arg Arg Leu Lys Arg Arg
 290 295 300
 Leu Val Pro Ser Asp Arg Lys
 305 310

<210> 306
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 306
 atggagatgg aaaactgcac cagggtaaaa gaatttattt tccttggcct gaccagaat 60
 cggaagtga gcttagtctt atttcttttc ctactcttgg tgtatgtgac aactttgctg 120
 ggaaacctcc tcatcatggg cactgttacc tgtgaatctc gccttcacac gccatgtat 180
 tttttgctcc ataatttatc tattgccgat atctgcttct cttccatcac agtgcccaag 240
 gttctggtgg accttctgtc tgaaagaaag accatctcct tcaatcattg cttcactcag 300
 atgtttctat tccaccttat tggaggggtg gatgtatttt ctcttctcgg gatggcattg 360
 gatcgatatg tggccatctc caagcccctg cactatgcga ctatcatgag tagagaccat 420
 tgcattgggc tcacagtggc tgcctggttg gggggctttg tccactccat cgtgcagatt 480
 tccctgttgc tccactccc tttctgcgga cccaatgttc ttgacacttt ctactgtgat 540
 gtccaccggg tccctcaaact ggccataca gacattttca tacttgaact actaatgatt 600
 tccaacaatg gactgctcac cacactgtgg tttttctctg tcctgggtgtc ctacatagtc 660

atattatcat tacccaagtc tcaggcagga gagggcagga ggaaagccat ctccacctgc 720
acctcccaca tcaactgtgtt gaccctgcat ttcgtgccct gcatctatgt ctatgcccgg 780
cccttcaactg ccctcccat ggataaggcc atctctgtca ccttcaactgt catctcccct 840
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ctgaagagaa gacttgtgcc ttctgataga aaatag 936

<210> 307
<211> 315
<212> PRT
<213> Homo sapiens

<400> 307

Met	Ser	Ile	Thr	Lys	Ala	Trp	Asn	Ser	Ser	Ser	Val	Thr	Met	Phe	Ile	1	5	10	15
Leu	Leu	Gly	Phe	Thr	Asp	His	Pro	Glu	Leu	Gln	Ala	Leu	Leu	Phe	Val	20	25	30	
Thr	Phe	Leu	Gly	Ile	Tyr	Leu	Thr	Thr	Leu	Ala	Trp	Asn	Leu	Ala	Leu	35	40	45	
Ile	Phe	Leu	Ile	Arg	Gly	Asp	Thr	His	Leu	His	Thr	Pro	Met	Tyr	Phe	50	55	60	
Phe	Leu	Ser	Asn	Leu	Ser	Phe	Ile	Asp	Ile	Cys	Tyr	Ser	Ser	Ala	Val	65	70	75	80
Ala	Pro	Asn	Met	Leu	Thr	Asp	Phe	Phe	Trp	Glu	Gln	Lys	Thr	Ile	Ser	85	90	95	
Phe	Val	Gly	Cys	Ala	Ala	Gln	Phe	Phe	Phe	Phe	Val	Gly	Met	Gly	Leu	100	105	110	
Ser	Glu	Cys	Leu	Leu	Leu	Thr	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Ala	Ala	115	120	125	
Ile	Ser	Ser	Pro	Leu	Leu	Tyr	Pro	Thr	Ile	Met	Thr	Gln	Gly	Leu	Cys	130	135	140	
Thr	Arg	Met	Val	Val	Gly	Ala	Tyr	Val	Gly	Gly	Phe	Leu	Ser	Ser	Leu	145	150	155	160
Ile	Gln	Ala	Ser	Ser	Ile	Phe	Arg	Leu	His	Phe	Cys	Gly	Pro	Asn	Ile	165	170	175	
Ile	Asn	His	Phe	Phe	Cys	Asp	Leu	Pro	Pro	Val	Leu	Ala	Leu	Ser	Cys	180	185	190	
Ser	Asp	Thr	Phe	Leu	Ser	Gln	Val	Val	Asn	Phe	Leu	Val	Val	Val	Thr	195	200	205	
Val	Gly	Gly	Thr	Ser	Phe	Leu	Gln	Leu	Leu	Ile	Ser	Tyr	Gly	Tyr	Ile	210	215	220	
Val	Ser	Ala	Val	Leu	Lys	Ile	Pro	Ser	Ala	Glu	Gly	Arg	Trp	Lys	Ala	225	230	235	240
Cys	Asn	Thr	Cys	Ala	Ser	His	Leu	Met	Val	Val	Thr	Leu	Leu	Phe	Gly	245	250	255	

Thr Ala Leu Phe Val Tyr Leu Arg Pro Ser Ser Ser Tyr Leu Leu Gly
260 265 270

Arg Asp Lys Val Val Ser Val Phe Tyr Ser Leu Val Ile Pro Met Leu
275 280 285

Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu
290 295 300

Trp Lys Val Leu Glu Arg Lys Lys Val Phe Ser
305 310 315

<210> 308

<211> 948

<212> DNA

<213> Homo sapiens

<400> 308

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accctggcct ggaacctggc cctcattttt ctgatcagag gtgacaccca tctgcacaca 180
cccatgtact tcttcctaag caacttatct ttcattgaca tctgctactc ttctgctgtg 240
gctcccaata tgctcactga cttcttcttg gagcagaaga ccataatcatt tgtgggctgt 300
gctgctcagt tttttttctt tgtcggcatg ggtctgtctg agtgccctcct cctgactgct 360
atggcatacg accgatatgc agccatctcc agcccccttc tctaccccccac tatcatgacc 420
cagggcctct gtacacgcat ggtgggttggg gcataatggtg gtggccttcct gagctccctg 480
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tatggttaca tagtgtctgc ggtcctgaag atcccttcag cagagggccg atggaaagcc 720
tgcaacacgt gtgcctcgca tctgatggtg gtgactctgc tgtttgggac agcccttttc 780
gtgtacttgc gaccagctc cagctacttg ctaggcaggg acaagggtgt gtctgttttc 840
tattcattgg tgatcccat gctgaaccct ctcatttaca gtttgaggaa caaagagatc 900
aaggatgccc tgtggaaggt gttggaaagg aagaaagtgt tttcttag 948
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<210> 309

<211> 311

<212> PRT

<213> Homo sapiens

<400> 309

Met Glu Lys Ile Asn Asn Val Thr Glu Phe Ile Phe Trp Gly Leu Ser
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Gln Ser Pro Glu Ile Glu Lys Val Cys Phe Val Val Phe Ser Phe Phe
20 25 30

Tyr Ile Ile Ile Leu Leu Gly Asn Leu Leu Ile Met Leu Thr Val Cys
35 40 45

Leu Ser Asn Leu Phe Lys Ser Pro Met Tyr Phe Phe Leu Ser Phe Leu
50 55 60

Ser Phe Val Asp Ile Cys Tyr Ser Ser Val Thr Ala Pro Lys Met Ile
65 70 75 80

Val Asp Leu Leu Ala Lys Asp Lys Thr Ile Ser Tyr Val Gly Cys Met
85 90 95

Leu Gln Leu Leu Gly Val His Phe Phe Gly Cys Thr Glu Ile Phe Ile
100 105 110

Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Met Thr Ile Met Asn Arg Glu Thr Cys Asn Lys Met Leu Leu
130 135 140

Gly Thr Trp Val Gly Gly Phe Leu His Ser Ile Ile Gln Val Ala Leu
145 150 155 160

Val Val Gln Leu Pro Phe Cys Gly Pro Asn Glu Ile Asp His Tyr Phe
165 170 175

Cys Asp Val His Pro Val Leu Lys Leu Ala Cys Thr Glu Thr Tyr Ile
180 185 190

Val Gly Val Val Val Thr Ala Asn Ser Gly Thr Ile Ala Leu Gly Ser
195 200 205

Phe Val Ile Leu Leu Ile Ser Tyr Ser Ile Ile Leu Val Ser Leu Arg
210 215 220

Lys Gln Ser Ala Glu Gly Arg Arg Lys Ala Leu Ser Thr Cys Gly Ser
225 230 235 240

His Ile Ala Met Val Val Ile Phe Phe Gly Pro Cys Thr Phe Met Tyr
245 250 255

Met Arg Pro Asp Thr Thr Phe Ser Glu Asp Lys Met Val Ala Val Phe
260 265 270

Tyr Thr Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
275 280 285

Asn Ala Glu Val Lys Asn Ala Met Lys Lys Leu Trp Gly Arg Asn Val
290 295 300

Phe Leu Glu Ala Lys Gly Lys
305 310

<210> 310

<211> 936

<212> DNA

<213> Homo sapiens

<400> 310

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ctctcatca tgcctgacagt ttgcctgagc aacctgttta agtcacccat gtatttcttt 180
ctcagcttct tgtcttttgt ggacatttgt tactcttcag tcacagctcc caagatgatt 240
gttgacctgt tagcaaagga caaaacctatc tcctatgtgg ggtgcatggt gcaactgctt 300
ggagtacatt tctttggttg cactgagatc ttcatcctta ctgtaatggc ctatgatcgt 360
tatgtggcta tctgtaaacc cctacattat atgaccatca tgaaccggga gacatgcaat 420
aaaatgttat tagggacgtg ggtaggtggg ttcttacact ccattatcca agtggctctg 480
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cctgtgttga aacttgctg cacagaaaca tacattgttg gtgttgttgt gacagccaac 600
agtgggtacca ttgctctggg gagttttgtt atcttgctaa tctcctacag catcatccta 660
gtttccctga gaaagcagtc agcagaaggc aggcgcaaag ccctctccac ctgtggctcc 720

cacattgccca tggctggttat ctttttcgggc cctgtactt ttatgtacat gcgcacctgat 780
acgacctttt cagaggataa gatgggtggct gtattttaca ccattatcac tcccatgtta 840
aatcctctga ttatacact gagaaatgca gaagtaaaga atgcaatgaa gaaactgtgg 900
ggcagaaatg ttttcttgga ggctaaaggg aaatag 936

<210> 311
<211> 310
<212> PRT
<213> Homo sapiens

<400> 311
Met Met Asp Asn His Ser Ser Ala Thr Glu Phe His Leu Leu Gly Phe
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Pro Gly Ser Gln Gly Leu His His Ile Leu Phe Ala Ile Phe Phe Phe
20 25 30
Phe Tyr Leu Val Thr Leu Met Gly Asn Thr Val Ile Ile Val Ile Val
35 40 45
Cys Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Ser His
50 55 60
Leu Ser Thr Leu Glu Ile Leu Val Thr Thr Ile Ile Val Pro Met Met
65 70 75 80
Leu Trp Gly Leu Leu Phe Leu Gly Cys Arg Gln Tyr Leu Ser Leu His
85 90 95
Val Ser Leu Asn Phe Ser Cys Gly Thr Met Glu Phe Ala Leu Leu Gly
100 105 110
Val Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn Pro Leu Arg Tyr
115 120 125
Asn Ile Ile Met Asn Ser Ser Thr Cys Ile Trp Val Val Ile Val Ser
130 135 140
Trp Val Phe Gly Phe Leu Ser Glu Ile Trp Pro Ile Tyr Ala Thr Phe
145 150 155 160
Gln Phe Thr Phe Arg Lys Ser Asn Ser Leu Asp His Phe Tyr Cys Asp
165 170 175
Arg Gly Gln Leu Leu Lys Leu Ser Cys Asp Asn Thr Leu Leu Thr Glu
180 185 190
Phe Ile Leu Phe Leu Met Ala Val Phe Ile Leu Ile Gly Ser Leu Ile
195 200 205
Pro Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr Ile Leu Lys Ile
210 215 220
Pro Ser Ala Ser Gly Arg Arg Lys Ala Phe Ser Thr Phe Ala Ser His
225 230 235 240
Phe Thr Cys Val Val Ile Gly Tyr Gly Ser Cys Leu Phe Leu Tyr Val
245 250 255
Lys Pro Lys Gln Thr Gln Gly Val Glu Tyr Asn Lys Ile Val Ser Leu

260

265

270

Leu Val Ser Val Leu Thr Pro Phe Leu Asn Pro Phe Ile Phe Thr Leu
 275 280 285

Arg Asn Asp Lys Val Lys Glu Ala Leu Arg Asp Gly Met Lys Arg Cys
 290 295 300

Cys Gln Leu Leu Lys Asp
 305 310

<210> 312

<211> 933

<212> DNA

<213> Homo sapiens

<400> 312

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 aacacgggtca tcattgtgat tgtctgtgtg gataaacgtc tgcagtcccc catgtatttc 180
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 ctttggggat tgctcttccct gggatgcaga cagtatcttt ctctacatgt atcgctcaac 300
 ttttctgtg ggaccatgga gtttgcatta cttggagtga tggctgtgga cegttatgtg 360
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 gtaatatgtg catgggtgtt tggatttctt tctgaaatct ggcccatcta tgccacattt 480
 cagtttacct tccgcaaata aaattcatta gaccattttt actgtgaccg agggcaattg 540
 ctcaaactgt cctgcgataa cactcttctc acagagttaa tccttttctt aatggctgtt 600
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 acacagggag ttgagtacaa taagatagtt tccctgttgg tttctgtgtt aaccccttc 840
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<210> 313

<211> 399

<212> PRT

<213> Homo sapiens

<400> 313

Met Ser Phe Thr Ser Leu Ile Pro Ser Leu Cys Phe Ser Leu Thr Leu
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Pro Phe Leu Phe Cys Tyr Leu Ser Leu Leu Pro Phe Leu Ser Ala Phe
 20 25 30

Leu Phe Ile Thr Arg Trp Leu Leu Ala Phe Leu Ser Leu Phe Ser Val
 35 40 45

Ser Val Pro Val Ser Ser Val Ser Ser Ser Met Val Leu Cys Leu Tyr
 50 55 60

Leu Ser Val Ser Ala Ser Pro Ser Val Phe Cys Phe Ser Cys Met Gln
 65 70 75 80

Gly Pro Ile Leu Trp Ile Met Ala Asn Leu Ser Gln Pro Ser Glu Phe
 85 90 95

Val Leu Leu Gly Phe Ser Ser Phe Gly Glu Leu Gln Ala Leu Leu Tyr

100					105					110					
Gly	Pro	Phe	Leu	Met	Leu	Tyr	Leu	Leu	Ala	Phe	Met	Gly	Asn	Thr	Ile
		115					120					125			
Ile	Ile	Val	Met	Val	Ile	Ala	Asp	Thr	His	Leu	His	Thr	Pro	Met	Tyr
		130				135					140				
Phe	Phe	Leu	Gly	Asn	Phe	Ser	Leu	Leu	Glu	Ile	Leu	Val	Thr	Met	Thr
145					150					155					160
Ala	Val	Pro	Arg	Met	Leu	Ser	Asp	Leu	Leu	Val	Pro	His	Lys	Val	Ile
				165					170					175	
Thr	Phe	Thr	Gly	Cys	Met	Val	Gln	Phe	Tyr	Phe	His	Phe	Ser	Leu	Gly
			180					185					190		
Ser	Thr	Ser	Phe	Leu	Ile	Leu	Thr	Asp	Met	Ala	Leu	Asp	Arg	Phe	Val
		195					200					205			
Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr	Gly	Thr	Leu	Met	Ser	Arg	Ala	Met
	210					215					220				
Cys	Val	Gln	Leu	Ala	Gly	Ala	Ala	Trp	Ala	Ala	Pro	Phe	Leu	Ala	Met
225					230					235					240
Val	Pro	Thr	Val	Leu	Ser	Arg	Ala	His	Leu	Asp	Tyr	Cys	His	Gly	Asp
				245					250					255	
Val	Ile	Asn	His	Phe	Phe	Cys	Asp	Asn	Glu	Pro	Leu	Leu	Gln	Leu	Ser
		260						265					270		
Cys	Ser	Asp	Thr	Arg	Leu	Leu	Glu	Phe	Trp	Asp	Phe	Leu	Met	Ala	Leu
		275					280					285			
Thr	Phe	Val	Leu	Ser	Ser	Phe	Leu	Val	Thr	Leu	Ile	Ser	Tyr	Gly	Tyr
		290				295					300				
Ile	Val	Thr	Thr	Val	Leu	Arg	Ile	Pro	Ser	Ala	Ser	Ser	Cys	Gln	Lys
305					310					315					320
Ala	Phe	Ser	Thr	Cys	Gly	Ser	His	Leu	Thr	Leu	Val	Phe	Ile	Gly	Tyr
				325					330					335	
Ser	Ser	Thr	Ile	Phe	Leu	Tyr	Val	Arg	Pro	Gly	Lys	Ala	His	Ser	Val
			340					345					350		
Gln	Val	Arg	Lys	Val	Val	Ala	Leu	Val	Thr	Ser	Val	Leu	Thr	Pro	Phe
		355					360					365			
Leu	Asn	Pro	Phe	Ile	Leu	Thr	Phe	Cys	Asn	Gln	Thr	Val	Lys	Thr	Val
	370					375					380				
Leu	Gln	Gly	Gln	Met	Gln	Arg	Leu	Lys	Gly	Leu	Cys	Lys	Ala	Gln	
385					390					395					

<210> 314
 <211> 1200
 <212> DNA
 <213> Homo sapiens

<400> 314

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gcctttctct ctctattctc tgtctctgtc cctgtttctt ctgtttcaag ttcaatgggt 180
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ctcgccttca tgggaaacac catcatcata gttatggtca tagctgacac ccacctacat 420
acacccatgt acttcttctt gggcaatttt tccctgctgg agatcttggg aacctatgact 480
gcagtgccca ggatgctctc agacctgttg gtccccacaa aagtcattac cttcactggc 540
tgcattggtc agttctactt ccacttttcc ctgggggtcca cctccttctt catcctgaca 600
gacatggccc ttgatcgctt tgtggccatc tgccaccacac tgcgctatgg cactctgatg 660
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<210> 315

<211> 292

<212> PRT

<213> Homo sapiens

<400> 315

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Met Val Gly Asn Leu Leu Ile Trp Val Thr Thr Ile Gly Ser Pro Ser
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Leu Gly Ser Leu Met Tyr Phe Phe Leu Ala Tyr Leu Ser Leu Met Asp
      20              25              30

Ala Ile Tyr Ser Thr Ala Met Ser Pro Lys Leu Met Ile Asp Leu Leu
      35              40              45

Cys Asp Lys Ile Ala Ile Ser Leu Ser Ala Cys Met Gly Gln Leu Phe
      50              55              60

Ile Glu His Leu Leu Gly Gly Ala Glu Val Phe Leu Leu Val Val Met
      65              70              75              80

Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro Leu His Tyr Leu Asn
      85              90              95

Ile Met Asn Arg Leu Val Cys Ile Leu Leu Leu Val Val Ala Met Ile
      100             105             110

Gly Gly Phe Val His Ser Val Val Gln Ile Val Phe Leu Tyr Ser Leu
      115             120             125

Pro Ile Cys Gly Pro Asn Val Ile Asp His Ser Val Cys Asp Met Tyr
      130             135             140

Pro Leu Leu Glu Leu Leu Cys Leu Asp Thr Tyr Phe Ile Gly Leu Thr
      145             150             155             160

Val Val Ala Asn Gly Gly Ile Ile Cys Met Val Ile Phe Thr Phe Leu
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165

170

175

Leu Ile Ser Cys Gly Val Ile Leu Asn Phe Leu Lys Thr Tyr Ser Gln
 180 185 190
 Glu Glu Arg His Lys Ala Leu Pro Thr Cys Ile Ser His Ile Ile Val
 195 200 205
 Val Ala Leu Val Phe Val Pro Cys Ile Phe Met Tyr Val Arg Pro Val
 210 215 220
 Ser Asn Phe Pro Phe Asp Lys Leu Met Thr Val Phe Tyr Ser Ile Ile
 225 230 235 240
 Thr Leu Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Gln Ser Glu Met
 245 250 255
 Lys Asn Ala Met Lys Asn Leu Trp Cys Glu Lys Leu Ser Ile Val Arg
 260 265 270
 Lys Arg Val Ser Pro Thr Leu Asn Ile Phe Ile Pro Ser Ser Lys Ala
 275 280 285
 Thr Asn Arg Arg
 290

<210> 316
 <211> 879
 <212> DNA
 <213> Homo sapiens

<400> 316
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 cccaaattga tgatagactt actctgtgat aaaatcgcta tttccttgct agcttgcattg 180
 ggtcagctct tcatagaaca cttacttggt ggtgcagagg tcttcctttt ggtgggtgatg 240
 gcctatgatc gctatgtggc tatctctaag ccgctgcact atttgaacat catgaatcga 300
 ctgggttgca tccttctggt ggtgggtggcc atgattggag gttttgtgca ctctgtgggt 360
 caaattgtct ttctgtacag tctaccaatc tgtggcccca atgttattga ccactctgtc 420
 tgtgacatgt acccattggt ggaactggtg tgccttgaca cctactttat aggactcact 480
 gtgggttgcca atggtggaat aatttgtagt gtcactttta cctttctgct aatctcctgt 540
 ggagtcattcc taaacttcct taaaacttac agtcaggaag agaggcataa agccctgcct 600
 acctgcatct cccacatcat tgtgggtgccc ctctgtttttg ttccctgtat ttttatgtat 660
 gtttagaccg tttccaactt tccctttgat aaattaatga ctgtgtttta ttcaattatc 720
 acactcatgt tgaatccttt aatatactcg ttgagacaat cagagatgaa aaatgctatg 780
 aaaaatctct ggtgtgaaaa gttaagtata gttagaaaaa gagtatctcc cacactgaac 840
 atattttattc ctagttctaa ggcaacaaat aggcggtaa 879

<210> 317
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 317
 Met Ala Glu Thr Leu Gln Leu Asn Ser Thr Phe Leu His Pro Asn Phe
 1 5 10 15
 Phe Ile Leu Thr Gly Phe Pro Gly Leu Gly Ser Ala Gln Thr Trp Leu
 20 25 30

Thr Leu Val Phe Gly Pro Ile Tyr Leu Leu Ala Leu Leu Gly Asn Gly
 35 40 45
 Ala Leu Pro Ala Val Val Trp Ile Asp Ser Thr Leu His Gln Pro Met
 50 55 60
 Phe Leu Leu Leu Ala Ile Leu Ala Ala Thr Asp Leu Gly Leu Ala Thr
 65 70 75 80
 Ser Ile Ala Pro Gly Leu Leu Ala Val Leu Trp Leu Gly Pro Arg Ser
 85 90 95
 Val Pro Tyr Ala Val Cys Leu Val Gln Met Phe Phe Val His Ala Leu
 100 105 110
 Thr Ala Met Glu Ser Gly Val Leu Leu Ala Met Ala Cys Asp Arg Ala
 115 120 125
 Ala Ala Ile Gly Arg Pro Leu His Tyr Pro Val Leu Val Thr Lys Ala
 130 135 140
 Cys Val Gly Tyr Ala Ala Leu Ala Leu Ala Leu Lys Ala Val Ala Ile
 145 150 155 160
 Val Val Pro Phe Pro Leu Leu Val Ala Lys Phe Glu His Phe Gln Ala
 165 170 175
 Lys Thr Ile Gly His Thr Tyr Cys Ala His Met Ala Val Val Glu Leu
 180 185 190
 Val Val Gly Asn Thr Gln Ala Thr Asn Leu Tyr Gly Leu Ala Leu Ser
 195 200 205
 Leu Ala Ile Ser Gly Met Asp Ile Leu Gly Ile Thr Gly Ser Tyr Gly
 210 215 220
 Leu Ile Ala His Ala Val Leu Gln Leu Pro Thr Arg Glu Ala His Ala
 225 230 235 240
 Lys Ala Phe Gly Thr Cys Ser Ser His Ile Cys Val Ile Leu Ala Phe
 245 250 255
 Tyr Ile Pro Gly Leu Phe Ser Tyr Leu Ala His Arg Phe Gly His His
 260 265 270
 Thr Val Pro Lys Pro Val His Ile Leu Leu Ser Asn Ile Tyr Leu Leu
 275 280 285
 Leu Pro Pro Ala Leu Asn Pro Leu Ile Tyr Gly Ala Arg Thr Lys Gln
 290 295 300
 Ile Arg Asp Arg Leu Leu Glu Thr Phe Thr Phe Arg Lys Ser Pro Leu
 305 310 315 320

<210> 318

<211> 963

<212> DNA

<213> Homo sapiens

<400> 318
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ctgctggccc tgctgggcaa tggagcactg ccggcagtgg tgtggataga ctccacactg 180
caccagccca tgtttctact gttggccatc ctggcagcca cagacctggg cttagccaca 240
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cttctctcca acatctactt gctgctgcca cctgccctca acccctcat ctatggggcc 900
cgcaccaagc agatcagaga ccgactcctg gaaaccttca cattcagaaa aagcccgttg 960
taa 963

<210> 319
<211> 323
<212> PRT
<213> Homo sapiens

<400> 319
Met Ser His Thr Asn Val Thr Ile Phe His Pro Ala Val Phe Val Leu
1 5 10 15
Pro Gly Ile Pro Gly Leu Glu Ala Tyr His Ile Trp Leu Ser Ile Pro
20 25 30
Leu Cys Leu Ile Tyr Ile Thr Ala Val Leu Gly Asn Ser Ile Leu Ile
35 40 45
Val Val Ile Val Met Glu Arg Asn Leu His Val Pro Met Tyr Phe Phe
50 55 60
Leu Ser Met Leu Ala Val Met Asp Ile Leu Leu Ser Thr Thr Thr Val
65 70 75 80
Pro Lys Ala Leu Ala Ile Phe Trp Leu Gln Ala His Asn Ile Ala Phe
85 90 95
Asp Ala Cys Val Thr Gln Gly Phe Phe Val His Met Met Phe Val Gly
100 105 110
Glu Ser Ala Ile Leu Leu Ala Met Ala Phe Asp Arg Phe Val Ala Ile
115 120 125
Cys Ala Pro Leu Arg Tyr Thr Thr Val Leu Thr Trp Pro Val Val Gly
130 135 140
Arg Ile Ala Leu Ala Val Ile Thr Arg Ser Phe Cys Ile Ile Phe Pro
145 150 155 160
Val Ile Phe Leu Leu Lys Arg Leu Pro Phe Cys Leu Thr Asn Ile Val
165 170 175
Pro His Ser Tyr Cys Glu His Ile Gly Val Ala Arg Leu Ala Cys Ala

180	185	190
Asp Ile Thr Val Asn Ile Trp Tyr Gly Phe Ser Val Pro Ile Val Met		
195	200	205
Val Ile Leu Asp Val Ile Leu Ile Ala Val Ser Tyr Ser Leu Ile Leu		
210	215	220
Arg Ala Val Phe Arg Leu Pro Ser Gln Asp Ala Arg His Lys Ala Leu		
225	230	235
Ser Thr Cys Gly Ser His Leu Cys Val Ile Leu Met Phe Tyr Val Pro		
245	250	255
Ser Phe Phe Thr Leu Leu Thr His His Phe Gly Arg Asn Ile Pro Gln		
260	265	270
His Val His Ile Leu Leu Ala Asn Leu Tyr Val Ala Val Pro Pro Met		
275	280	285
Leu Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Gly		
290	295	300
Val Ala His Arg Phe Phe Asp Ile Lys Thr Trp Cys Cys Thr Ser Pro		
305	310	315
320		
Leu Gly Ser		

<210> 320
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 320
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 gtcctgggaa acagcaccct gatagtgggt attgtcatgg aacgtaacct tcatgtgccc 180
 atgtatttct tcctctcaat gctggccgct atggacatcc tgctgtctac caccactgtg 240
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 ggcttctcag tgcccattgt catggctcatc ttggatgtta tcctcatcgc tgtgtcttac 660
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 agcacttgtg gctcccacct ctgtgtcatc cttatgtttt atgttccatc cttctttacc 780
 ttattgacct atcatttttg gcgtaatat cctcaacatg tccatatctt gctggccaat 840
 ctttatgtgg cagtgcacc aatgctgaac cccattgtct atgggtgtgaa gactaagcag 900
 atacgtgagg gtgtagccca ccggttcttt gacatcaaga cttgggtgtg tacctcccct 960
 ctgggctcat ga 972

<210> 321
 <211> 345
 <212> PRT
 <213> Homo sapiens

<400> 321

Met His Phe Leu Ser Gln Asn Asp Leu Asn Ile Asn Leu Ile Pro His
 1 5 10 15
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 20 25 30
 Arg His Met Lys Ile Phe Asn Ser Pro Ser Asn Ser Ser Thr Phe Thr
 35 40 45
 Gly Phe Ile Leu Leu Gly Phe Pro Cys Pro Arg Glu Gly Gln Ile Leu
 50 55 60
 Leu Phe Val Leu Phe Thr Val Val Tyr Leu Leu Thr Leu Met Gly Asn
 65 70 75 80
 Gly Ser Ile Ile Cys Ala Val His Trp Asp Gln Arg Leu His Ala Pro
 85 90 95
 Met Tyr Ile Leu Leu Ala Asn Phe Ser Phe Leu Glu Ile Cys Tyr Val
 100 105 110
 Thr Ser Thr Val Pro Ser Met Leu Ala Asn Phe Leu Ser Asp Thr Lys
 115 120 125
 Ile Ile Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser
 130 135 140
 Leu Gly Ser Thr Glu Cys Phe Phe Leu Ala Val Met Ala Phe Asp Arg
 145 150 155 160
 Tyr Leu Ala Ile Cys Arg Pro Leu Arg Tyr Pro Thr Ile Met Thr Arg
 165 170 175
 Arg Leu Cys Thr Asn Leu Val Val Asn Cys Trp Val Leu Gly Phe Ile
 180 185 190
 Trp Phe Leu Ile Pro Ile Val Asn Ile Ser Gln Met Ser Phe Cys Gly
 195 200 205
 Ser Arg Ile Ile Asp His Phe Leu Cys Asp Pro Ala Pro Leu Leu Thr
 210 215 220
 Leu Thr Cys Lys Lys Gly Pro Val Ile Glu Leu Val Phe Ser Val Leu
 225 230 235 240
 Ser Pro Leu Pro Val Phe Met Leu Phe Leu Phe Ile Val Gly Ser Tyr
 245 250 255
 Ala Leu Val Val Arg Ala Val Leu Arg Val Pro Ser Ala Ala Gly Arg
 260 265 270
 Arg Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Ser Leu
 275 280 285
 Phe Tyr Gly Ser Val Leu Val Met Tyr Gly Ser Pro Pro Ser Lys Asn
 290 295 300
 Glu Ala Gly Lys Gln Lys Thr Val Thr Leu Phe Tyr Ser Val Val Thr
 305 310 315 320
 Pro Leu Leu Asn Pro Val Ile Tyr Ser Leu Arg Asn Lys Asp Met Arg

Lys Ala Leu Lys Lys Phe Trp Gly Thr
340 345

<210> 322
<211> 1038
<212> DNA
<213> Homo sapiens

<400> 322
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cccagcaact ccagcacctt cactggcttc atcctcctgg gcttcccttg cccagggag 180
gggcagatcc tcctctttgt gctcttcaact gttgtttacc tcctgaccct catgggcaat 240
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ctcgccaact tctccttctt ggagatatgt tatgtcacct ccacagtccc cagcatgctg 360
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tttttcttct ccttgggctc tacagaatgc tttttcctgg cagttatggc atttgatcga 480
taccttgcca tctgtcggcc tctacgctat ccaaccatta tgaccagacg tctctgtacc 540
aatcttgctg tcaattgctg ggtacttggg ttcactctgg tcttgattcc tatcgtcaac 600
atctcccaaa tgccttctg tggatctagg attattgacc acttcctatg tgaccagct 660
cctcttctaa ctctcacttg caaaaaaggc cctgtgatag agcttgtctt ttctgtctta 720
agtcctctgc ctgtctttat gctctttctc ttcattgtgg ggtcctatgc tctggctgtg 780
agagctgtgt tgagggtccc ttcagcagct gggagaagaa aggccttctc cacctgtggg 840
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ccatctaaga atgaagctgg aaagcagaag actgtgactc tgttttatc tgttggtacc 960
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aaattttggg gaacataa 1038

<210> 323
<211> 330
<212> PRT
<213> Homo sapiens

<400> 323
Met Phe Phe Ile Ile His Ser Leu Val Thr Ser Val Phe Leu Thr Ala
1 5 10 15
Leu Gly Pro Gln Asn Arg Thr Met His Phe Val Thr Glu Phe Val Leu
20 25 30
Leu Gly Phe His Gly Gln Arg Glu Met Gln Ser Cys Phe Phe Ser Phe
35 40 45
Ile Leu Val Leu Tyr Leu Leu Thr Leu Leu Gly Asn Gly Ala Ile Val
50 55 60
Cys Ala Val Lys Leu Asp Arg Arg Leu His Thr Pro Met Tyr Ile Leu
65 70 75 80
Leu Gly Asn Phe Ala Phe Leu Glu Ile Trp Tyr Ile Ser Ser Thr Val
85 90 95
Pro Asn Met Leu Val Asn Ile Leu Ser Glu Ile Lys Thr Ile Ser Phe
100 105 110
Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly Thr Thr
115 120 125

Glu Cys Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile
 130 135 140
 Cys Arg Pro Leu His Tyr Pro Ser Ile Met Thr Gly Lys Phe Cys Ile
 145 150 155 160
 Ile Leu Val Cys Val Cys Trp Val Gly Gly Phe Leu Cys Tyr Pro Val
 165 170 175
 Pro Ile Val Leu Ile Ser Gln Leu Pro Phe Cys Gly Pro Asn Ile Ile
 180 185 190
 Asp His Leu Val Cys Asp Pro Gly Pro Leu Phe Ala Leu Ala Cys Ile
 195 200 205
 Ser Ala Pro Ser Thr Glu Leu Ile Cys Tyr Thr Phe Asn Ser Met Ile
 210 215 220
 Ile Phe Gly Pro Phe Leu Ser Ile Leu Gly Ser Tyr Thr Leu Val Ile
 225 230 235 240
 Arg Ala Val Leu Cys Ile Pro Ser Gly Ala Gly Arg Thr Lys Ala Phe
 245 250 255
 Ser Thr Cys Gly Ser His Leu Met Val Val Ser Leu Phe Tyr Gly Thr
 260 265 270
 Leu Met Val Met Tyr Val Ser Pro Thr Ser Gly Asn Pro Ala Gly Met
 275 280 285
 Gln Lys Ile Ile Thr Leu Val Tyr Thr Ala Met Thr Pro Phe Leu Asn
 290 295 300
 Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Asp Ala Leu Lys
 305 310 315 320
 Arg Val Leu Gly Leu Thr Val Ser Gln Asn
 325 330

<210> 324
 <211> 993
 <212> DNA
 <213> Homo sapiens

<400> 324
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 aacagaacaa tgcattttgt gactgagttt gtcctcctgg gtttccatgg tcaaaggagg 120
 atgcagagct gcttcttctc attcatcctg gttctctatc tcctgacact gctaggggaat 180
 ggagctattg tctgtgcagt gaaattggac aggcggctcc acacacccat gtacatcctt 240
 ctgggaaact ttgcctttct agagatctgg tacatttcct ccactgtccc aaacatgcta 300
 gtcaatatcc tctctgagat taaaaccatc tccttctctg gttgcttcct gcaattctat 360
 ttcttttttt cactgggtac aacagagtgt ttctttttat cagttatggc ttatgatcgg 420
 tacctggcca tctgtcgtcc attacactac cctccatca tgactgggaa gttctgtata 480
 attctgggtc gtgtatgctg ggtaggcgga tttctctgct atccagtcce tattgttctt 540
 atctcccaac ttcccttctg tgggcccac atcattgacc acttggtgtg tgaccaggc 600
 ccattgtttg cactggcctg catctctgct ccttccactg agcttatctg ttacaccttc 660
 aactcgatga ttatcttttg gcccttcctc tccatcttgg gatcttacac tctgggtcatc 720
 agagctgtgc tttgtattcc ctctgggtgct ggtcgaaacta aagctttctc cacatgtggg 780
 tcccacctaa tgggtggtgtc tctattctat ggaaccctta tgggtgatgta tgtgagccca 840

acatcagggga acccagcagg aatgcagaag atcatcactc tgggtatacac agcaatgact 900
ccattcttaa atccccttat ctatagtctt cgaacaaaag acatgaaaga tgctctaaag 960
agagtcctgg ggtaaacagt tagcctaaaac tga 993

<210> 325
<211> 324
<212> PRT
<213> Homo sapiens

<400> 325
Met Ser Phe Phe Phe Val Asp Leu Arg Pro Met Asn Arg Ser Ala Thr
1 5 10 15
His Ile Val Thr Glu Phe Ile Leu Leu Gly Phe Pro Gly Cys Trp Lys
20 25 30
Ile Gln Ile Phe Leu Phe Ser Leu Phe Leu Val Ile Tyr Val Leu Thr
35 40 45
Leu Leu Gly Asn Gly Ala Ile Ile Tyr Ala Val Arg Cys Asn Pro Leu
50 55 60
Leu His Thr Pro Met Tyr Phe Leu Leu Gly Asn Phe Ala Phe Leu Glu
65 70 75 80
Ile Trp Tyr Val Ser Ser Thr Ile Pro Asn Met Leu Val Asn Ile Leu
85 90 95
Ser Lys Thr Lys Ala Ile Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr
100 105 110
Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys Leu Phe Leu Ala Val Met
115 120 125
Ala Tyr Asp Arg Tyr Leu Ala Ile Cys His Pro Leu Gln Tyr Pro Ala
130 135 140
Ile Met Thr Val Arg Phe Cys Gly Lys Leu Val Ser Phe Cys Trp Leu
145 150 155 160
Ile Gly Phe Leu Gly Tyr Pro Ile Pro Ile Phe Tyr Ile Ser Gln Leu
165 170 175
Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Leu Cys Asp Met Asp
180 185 190
Pro Leu Met Ala Leu Ser Cys Ala Pro Ala Pro Ile Thr Glu Cys Ile
195 200 205
Phe Tyr Thr Gln Ser Ser Leu Val Leu Phe Phe Thr Ser Met Tyr Ile
210 215 220
Leu Arg Ser Tyr Ile Leu Leu Leu Thr Ala Val Phe Gln Val Pro Ser
225 230 235 240
Ala Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys Gly Ser His Leu Val
245 250 255
Val Val Ser Leu Phe Tyr Gly Thr Val Met Val Met Tyr Val Ser Pro
260 265 270

Thr Tyr Gly Ile Pro Thr Leu Leu Gln Lys Ile Leu Thr Leu Val Tyr
275 280 285

Ser Val Thr Thr Pro Leu Phe Asn Pro Leu Ile Tyr Thr Leu Arg Asn
290 295 300

Lys Asp Met Lys Leu Ala Leu Arg Asn Val Leu Phe Gly Met Arg Ile
305 310 315 320

Arg Gln Asn Ser

<210> 326
<211> 975
<212> DNA
<213> Homo sapiens

<400> 326
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tttttggtga tttatgtctt gaccttgctg ggaaatggag ccatcatcta tgcagtgaga 180
tgcaaccac tactacacac ccccatgtac tttctgctgg gaaattttgc cttccttgag 240
atctgggtatg tgtcctccac tattcctaac atgctagtca acattctctc caagaccaag 300
gccatctcat tttctgggtg ctctctccag ttctatttct tcttttctact gggaacaact 360
gaatgtctct ttctggcagt aatggcttat gatcgatacc tggccatctg ccaccactg 420
cagtaccctg ccatcatgac tgtaagggtc tgtggtaagc tgggtgtctt ctggtggctt 480
attggattcc ttggataccc aattcccat ttctacatct cccaactccc cttctgtggt 540
cctaatatca ttgatcactt cctgtgtgac atggacccat tgatggctct atcctgtgcc 600
ccagctccca taactgaatg tattttctat actcagagct cccttgctct ctttttctact 660
agtatgtaca ttcttcgac ctatatcctg ttactaacag ctgtttttca ggtcccttct 720
gcagctggtc ggagaaaagc cttctctacc tgtggttctc atttggttgt ggtatctctt 780
ttctatggga cagtcattgt aatgtatgta agtcctacat atgggatccc aactttattg 840
cagaagatcc tcacactggt atattcagta acgactctc tttttaatcc tctgatctat 900
actcttcgta ataaggacat gaaactcgct ctgagaaatg tcctgtttgg aatgagaatt 960
cgtcaaaatt cgtga 975

<210> 327
<211> 291
<212> PRT
<213> Homo sapiens

<400> 327
Met Val Gly Ala Asn His Ser Val Val Ser Glu Phe Val Phe Leu Gly
1 5 10 15
Leu Thr Asn Ser Trp Glu Ile Arg Leu Leu Leu Val Phe Ser Ser
20 25 30
Met Phe Tyr Met Ala Ser Met Met Gly Asn Ser Leu Ile Leu Leu Thr
35 40 45
Val Thr Ser Asp Pro His Leu His Ser Pro Met Tyr Phe Leu Leu Ala
50 55 60
Asn Leu Ser Phe Ile Asp Leu Gly Val Ser Ser Val Thr Ser Pro Lys
65 70 75 80
Met Ile Tyr Asp Leu Phe Arg Lys His Glu Val Ile Ser Phe Gly Gly

85

90

95

Cys Ile Ala Gln Ile Phe Phe Ile His Val Ile Gly Gly Val Glu Met
 100 105 110

Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125

Pro Leu Gln Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Met Phe Phe
 130 135 140

Leu Val Ala Ala Trp Val Thr Gly Leu Ile His Ser Val Val Gln Leu
 145 150 155 160

Val Phe Val Val Asn Leu Pro Phe Cys Gly Pro Asn Val Ser Asp Ser
 165 170 175

Phe Tyr Cys Asp Leu Pro Arg Phe Ile Lys Leu Ala Cys Thr Asp Ser
 180 185 190

Tyr Arg Leu Glu Phe Met Val Thr Ala Asn Ser Gly Phe Ile Ser Leu
 195 200 205

Gly Ser Phe Phe Ile Leu Ile Ile Ser Tyr Val Val Ile Ile Leu Thr
 210 215 220

Val Leu Lys His Ser Ser Ala Gly Leu Ser Lys Ala Leu Ser Thr Leu
 225 230 235 240

Ser Ala His Val Ser Val Val Val Leu Phe Phe Gly Pro Leu Ile Phe
 245 250 255

Val Tyr Thr Trp Pro Ser Pro Ser Thr His Leu Asp Lys Phe Leu Ala
 260 265 270

Ile Phe Asp Ala Val Leu Thr Pro Val Leu Asn Pro Ile Ile Tyr Thr
 275 280 285

Phe Arg Asn
 290

<210> 328

<211> 876

<212> DNA

<213> Homo sapiens

<400> 328

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 ggaaactctc tcattttgct cactgtgact tctgaccctc acttgactc ccccatgtat 180
 tttctgttag ccaacctctc cttcattgac ctgggtgttt cctctgtcac ttctcccaa 240
 atgatttatg acctgttcag aaagcacgaa gtcattctct ttggaggctg catcgctcaa 300
 atcttcttca tccacgtcat tggcgggtgt gagatgggtg tgctcatagc catggccttt 360
 gacagatatg tggccatatg taagccctc cagtacctga ccattatgag cccaagaatg 420
 tgcattgtct tcttagtggc tgccgtgggt accggcctta tccactctgt agttcaattg 480
 gttttttagt taaacttgcc cttctgtggt cctaattgat cggacagctt ttactgtgac 540
 cttcctcggt tcatcaaact tgccgtgcaca gacagctacc gactggagtt catgggtaca 600
 gccaacagtg gattcatctc tctgggctcc ttcttcatac tgatcatttc ctatgtgggtc 660
 atcattctca ctgttctgaa acactcttca gctgggtttat ccaaggctct gtccaccctt 720
 tcagctcacg tcagtgtggg agttttgttc tttgggtcct tgatttttgt ctatacgtgg 780

ccatctccct ccacacacct ggataagttt ctggccatct ttgatgcagt tctcactcct 840
gttttaaatac ctatcatcta cacattcagg aattga 876

<210> 329
<211> 312
<212> PRT
<213> Homo sapiens

<400> 329
Met Asn Gly Met Asn His Ser Val Val Ser Glu Phe Val Phe Met Gly
1 5 10 15
Leu Thr Asn Ser Arg Glu Ile Gln Leu Leu Leu Phe Val Phe Ser Leu
20 25 30
Leu Phe Tyr Phe Ala Ser Met Met Gly Asn Leu Val Ile Val Phe Thr
35 40 45
Val Thr Met Asp Ala His Leu His Ser Pro Met Tyr Phe Leu Leu Ala
50 55 60
Asn Leu Ser Ile Ile Asp Met Ala Phe Cys Ser Ile Thr Ala Pro Lys
65 70 75 80
Met Ile Cys Asp Ile Phe Lys Lys His Lys Ala Ile Ser Phe Arg Gly
85 90 95
Cys Ile Thr Gln Ile Phe Phe Ser His Ala Leu Gly Gly Thr Glu Met
100 105 110
Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Met Ala Ile Cys Lys
115 120 125
Pro Leu His Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Leu Tyr Phe
130 135 140
Leu Ala Thr Ser Ser Ile Ile Gly Leu Ile His Ser Leu Val Gln Leu
145 150 155 160
Val Phe Val Val Asp Leu Pro Phe Cys Gly Pro Asn Ile Phe Asp Ser
165 170 175
Phe Tyr Cys Asp Leu Pro Arg Leu Leu Arg Leu Ala Cys Thr Asn Thr
180 185 190
Gln Glu Leu Glu Phe Met Val Thr Val Asn Ser Gly Leu Ile Ser Val
195 200 205
Gly Ser Phe Val Leu Leu Val Ile Ser Tyr Ile Phe Ile Leu Phe Thr
210 215 220
Val Trp Lys His Ser Ser Gly Gly Leu Ala Lys Ala Leu Ser Thr Leu
225 230 235 240
Ser Ala His Val Thr Val Val Ile Leu Phe Phe Gly Pro Leu Met Phe
245 250 255
Phe Tyr Thr Trp Pro Ser Pro Thr Ser His Leu Asp Lys Tyr Leu Ala
260 265 270

Ile Phe Asp Ala Phe Ile Thr Pro Phe Leu Asn Pro Val Ile Tyr Thr
275 280 285

Phe Arg Asn Lys Asp Met Lys Val Ala Met Arg Arg Leu Cys Ser Arg
290 295 300

Leu Ala His Phe Thr Lys Ile Leu
305 310

<210> 330
<211> 939
<212> DNA
<213> Homo sapiens

<400> 330
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cgggagattc agcttctact ttttgtttcc tctttgttgt tctactttgc gagcatgatg 120
ggaaaccttg tcattgtatt cactgtaacc atggatgctc atctgcactc ccccatgtat 180
ttcctcctgg ctaacctctc aatcattgat atggcatttt gctcaattac agcccctaag 240
atgatttgtg atattttcaa gaagcacaag gccatctcct ttcgggggatg tattactcag 300
atcttcttta gccatgctct tgggggcact gagatgggtgc tgctcatagc catggccttt 360
gacagataca tggccatatg taaacctctc cactacctga ccatcatgag cccaagaatg 420
tgtctatact ttttagccac ttcctctatc attggcctta tccactcatt ggtccaatta 480
gtttttgtgg tagatttacc tttttgtggg cctaatatct ttgacagttt ttactgtgat 540
ctccctcggc tcttcagact tgccctgtacc aacacccaag aactggagtt catgggtcact 600
gtcaatagtg gactcatttc tgtgggctcc tttgtcttgc tggttaatttc ctacatcttc 660
attctgttca ctgtttgga acattcttct ggtggtctag ccaaggccct ctctaccctg 720
tcagctcatg tcaactgtgg catcttggtc tttgggccac tgatgttttt ctacacatgg 780
ccttctccca catcacacct ggataaatat cttgctattt ttgatgcatt tattactcct 840
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ctgtgcagtc gtcttgcgca ttttacaaag attttgtaa 939

<210> 331
<211> 354
<212> PRT
<213> Homo sapiens

<400> 331
Met Thr Asn Lys Met Tyr Ala Ile Tyr Ile Lys Asn Leu Asn Tyr Phe
1 5 10 15
Ser Phe Leu Ile Val Gln Cys Leu Gln Pro Thr Met Ala Ile Phe Asn
20 25 30
Asn Thr Thr Ser Ser Ser Ser Asn Phe Leu Leu Thr Ala Phe Pro Gly
35 40 45
Leu Glu Cys Ala His Val Trp Ile Ser Ile Pro Val Cys Cys Leu Tyr
50 55 60
Thr Ile Ala Leu Leu Gly Asn Ser Met Ile Phe Leu Val Ile Ile Thr
65 70 75 80
Lys Arg Arg Leu His Lys Pro Met Tyr Tyr Phe Leu Ser Met Leu Ala
85 90 95
Ala Val Asp Leu Cys Leu Thr Ile Thr Thr Leu Pro Thr Val Leu Gly
100 105 110

Val Leu Trp Phe His Ala Arg Glu Ile Ser Phe Lys Ala Cys Phe Ile
 115 120 125
 Gln Met Phe Phe Val His Ala Phe Ser Leu Leu Glu Ser Ser Val Leu
 130 135 140
 Val Ala Met Ala Phe Asp Arg Phe Val Ala Ile Cys Asn Pro Leu Asn
 145 150 155 160
 Tyr Ala Thr Ile Leu Thr Asp Arg Met Val Leu Val Ile Gly Leu Val
 165 170 175
 Ile Cys Ile Arg Pro Ala Val Phe Leu Leu Pro Leu Leu Val Ala Ile
 180 185 190
 Asn Thr Val Ser Phe His Gly Gly His Glu Leu Ser His Pro Phe Cys
 195 200 205
 Tyr His Pro Glu Val Ile Lys Tyr Thr Tyr Ser Lys Pro Trp Ile Ser
 210 215 220
 Ser Phe Trp Gly Leu Phe Leu Gln Leu Tyr Leu Asn Gly Thr Asp Val
 225 230 235 240
 Leu Phe Ile Leu Phe Ser Tyr Val Leu Ile Leu Arg Thr Val Leu Gly
 245 250 255
 Ile Val Ala Arg Lys Lys Gln Gln Lys Ala Leu Ser Thr Cys Val Cys
 260 265 270
 His Ile Cys Ala Val Thr Ile Phe Tyr Val Pro Leu Ile Ser Leu Ser
 275 280 285
 Leu Ala His Arg Leu Phe His Ser Thr Pro Arg Val Leu Cys Ser Thr
 290 295 300
 Leu Ala Asn Ile Tyr Leu Leu Leu Pro Pro Val Leu Asn Pro Ile Ile
 305 310 315 320
 Tyr Ser Leu Lys Thr Lys Thr Ile Arg Gln Ala Met Phe Gln Leu Leu
 325 330 335
 Gln Ser Lys Gly Ser Trp Gly Phe Asn Val Arg Gly Leu Arg Gly Arg
 340 345 350

Trp Asp

<210> 332
 <211> 1065
 <212> DNA
 <213> Homo sapiens

<400> 332
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 gttcagtgtc ttcaaccaac catggcaata ttcaataaca ccacttcgtc ttcctcaaac 120
 ttctctctca ctgcattccc tgggctggaa tgtgctcatg tctggatctc cattccagtc 180
 tgctgtctct acaccattgc cctcttggga aacagtatga tctttcttgt catcattact 240
 aagcggagac tccacaaacc catgtattat ttcctctcca tgctggcagc tgttgatcta 300
 tgtctgacca ttacgacct tcccactgtg cttggtgttc tctggtttca tgcccgggag 360

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atcagcttta aagcttgctt cattcaaagt ttctttgtgc atgctttctc cttgctggag 420
tcctcgggtgc tggtagccat ggcctttgac cgcttcgtgg ctatctgtaa cccactgaac 480
tatgtacta tcctcacaga caggatgggc ctgggtgatag ggctggtcac ctgcattaga 540
ccagcagttt tcttacttcc ccttcttgta gccataaaca ctgtgtcttt tcatgggggt 600
cacgagcttt cccatccatt ttgtaccac ccagaagtga tcaaatacac atattccaaa 660
ccttggatca gcagtttttg gggactgttt cttcagctct acctgaatgg cactgacgta 720
ttgtttattc ttttctccta tgtcctgac ctcctgactg ttctgggcat tgtggcccga 780
aagaagcaac aaaaagctct cagcacttgt gtctgtcaca tctgtgcagt cactattttc 840
tatgtgccac tgatcagcct ctctttggca caccgcctct tccactccac cccaaggggt 900
ctctgtagca ctttggccaa tatttatctg ctcttaccac ctgtgctgaa ccctatcatt 960
tacagcttga agaccaagac aatccgccag gctatgttcc agctgctcca atccaaggggt 1020
tcattggggtt ttaatgtgag gggctcttagg ggaagatggg attga 1065

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<210> 333
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 333

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Met Ser Val Leu Asn Asn Ser Glu Val Lys Leu Phe Leu Leu Ile Gly
  1              5              10              15

Ile Pro Gly Leu Glu His Ala His Ile Trp Phe Ser Ile Pro Ile Cys
          20              25              30

Leu Met Tyr Leu Leu Ala Ile Met Gly Asn Cys Thr Ile Leu Phe Ile
          35              40              45

Ile Lys Thr Glu Pro Ser Leu His Glu Pro Met Tyr Tyr Phe Leu Ala
          50              55              60

Met Leu Ala Val Ser Asp Met Gly Leu Ser Leu Ser Ser Leu Pro Thr
          65              70              75              80

Met Leu Arg Val Phe Leu Phe Asn Ala Met Gly Ile Ser Pro Asn Ala
          85              90              95

Cys Phe Ala Gln Glu Phe Phe Ile His Gly Phe Thr Val Met Glu Ser
          100              105              110

Ser Val Leu Leu Ile Met Ser Leu Asp Arg Phe Leu Ala Ile His Asn
          115              120              125

Pro Leu Arg Tyr Ser Ser Ile Leu Thr Ser Asn Arg Val Ala Lys Met
          130              135              140

Gly Leu Ile Leu Ala Ile Arg Ser Ile Leu Leu Val Ile Pro Phe Pro
          145              150              155              160

Phe Thr Leu Arg Arg Leu Lys Tyr Cys Gln Lys Asn Leu Leu Ser His
          165              170              175

Ser Tyr Cys Leu His Gln Asp Thr Met Lys Leu Ala Cys Ser Asp Asn
          180              185              190

Lys Thr Asn Val Ile Tyr Gly Phe Phe Ile Ala Leu Cys Thr Met Leu
          195              200              205

Asp Leu Ala Leu Ile Val Leu Ser Tyr Val Leu Ile Leu Lys Thr Ile
          210              215              220

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Leu Ser Ile Ala Ser Leu Ala Glu Arg Leu Lys Ala Leu Asn Thr Cys
 225 230 235 240
 Val Ser His Ile Cys Ala Val Leu Thr Phe Tyr Val Pro Ile Ile Thr
 245 250 255
 Leu Ala Ala Met His His Phe Ala Lys His Lys Ser Pro Leu Val Val
 260 265 270
 Ile Leu Ile Ala Asp Met Phe Leu Leu Val Pro Pro Leu Met Asn Pro
 275 280 285
 Ile Val Tyr Cys Val Lys Thr Arg Gln Ile Trp Glu Lys Ile Leu Gly
 290 295 300
 Lys Leu Leu Asn Val Cys Gly Arg
 305 310

<210> 334
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 334
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 gaacatgccc acatttggtt ctccatcccc atttgccctca tgtacctgct tgccatcatg 120
 ggcaactgca ccattctctt tattataaag acagagccct cgcttcatga gcccattgat 180
 tatttccttg ccattgttggc tgtctctgac atgggcctgt ccctctcttc ccttctctacc 240
 atgttgaggg tcttcttgtt caatgccatg ggaatttcac ctaatgcctg ctttgctcaa 300
 gaattcttca ttcattggatt cactgtcatg gaatcctcag tacttctaata tatgtctttg 360
 gaccgctttc ttgccattca caatccctta agatacagtt ctatcctcac tagcaacagg 420
 gttgctaaaa tgggacttat ttttagccatt aggagcattc tcttagtgat tccatttccc 480
 ttcaccttaa ggagattaaa atattgtcaa aagaatcttc tttctcactc atactgtctt 540
 catcaggata ccatgaagct ggctgctct gacaacaaga ccaatgtcat ctatggcttc 600
 ttcattgctc tctgtactat gctggacttg gcaactgattg ttttgtctta tgtgctgatc 660
 ttgaagacta tactcagcat tgcattcttg gcagagaggc ttaaggccct aaataacctgt 720
 gtctcccaca tctgtgctgt gctcaccttc tatgtgccc tcatcaccct ggctgccatg 780
 catcactttg ccaagcaca aagccctctt gttgtgatcc ttattgcaga tatgttcttg 840
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 aagatcttgg ggaagttgct taatgtatgt gggagataa 939

<210> 335
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 335
 Met Thr Leu Gly Ser Leu Gly Asn Ser Ser Ser Ser Val Ser Ala Thr
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 Phe Leu Leu Ser Gly Ile Pro Gly Leu Glu Arg Met His Ile Trp Ile
 20 25 30
 Ser Ile Pro Leu Cys Phe Met Tyr Leu Val Ser Ile Pro Gly Asn Cys
 35 40 45
 Thr Ile Leu Phe Ile Ile Lys Thr Glu Arg Ser Leu His Glu Pro Met
 50 55 60

Tyr Leu Phe Leu Ser Met Leu Ala Leu Ile Asp Leu Gly Leu Ser Leu
 65 70 75 80
 Cys Thr Leu Pro Thr Val Leu Gly Ile Phe Trp Val Gly Ala Arg Glu
 85 90 95
 Ile Ser His Asp Ala Cys Phe Ala Gln Leu Phe Phe Ile His Cys Phe
 100 105 110
 Ser Phe Leu Glu Ser Ser Val Leu Ser Met Ala Phe Asp Arg Phe
 115 120 125
 Val Ala Ile Cys His Pro Leu His Tyr Val Ser Ile Leu Thr Asn Thr
 130 135 140
 Val Ile Gly Arg Ile Gly Leu Val Ser Leu Gly Arg Ser Val Ala Leu
 145 150 155 160
 Ile Phe Pro Leu Pro Phe Met Leu Lys Arg Phe Pro Tyr Cys Gly Ser
 165 170 175
 Pro Val Leu Ser His Ser Tyr Cys Leu His Gln Glu Val Met Lys Leu
 180 185 190
 Ala Cys Ala Asp Met Lys Ala Asn Ser Ile Tyr Gly Met Phe Val Ile
 195 200 205
 Val Ser Thr Val Gly Ile Asp Ser Leu Leu Ile Leu Phe Ser Tyr Ala
 210 215 220
 Leu Ile Leu Arg Thr Val Leu Ser Ile Ala Ser Arg Ala Glu Arg Phe
 225 230 235 240
 Lys Ala Leu Asn Thr Cys Val Ser His Ile Cys Ala Val Leu Leu Phe
 245 250 255
 Tyr Thr Pro Met Ile Gly Leu Ser Val Ile His Arg Phe Gly Lys Gln
 260 265 270
 Ala Pro His Leu Val Gln Val Val Met Gly Phe Met Tyr Leu Leu Phe
 275 280 285
 Pro Pro Val Met Asn Pro Ile Val Tyr Ser Val Lys Thr Lys Gln Ile
 290 295 300
 Arg Asp Arg Val Thr His Ala Phe Cys Tyr
 305 310

<210> 336
 <211> 945
 <212> DNA
 <213> Homo sapiens

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 ggcacccctg ggctggagcg catgcacatc tggatctcca tcccactgtg cttcatgtat 120
 ctgggtttcca tcccgggcaa ctgcacaatt ctttttatca ttaaaacaga gcgctcactt 180
 catgaacctt tgtatctctt cctgtccatg ctggctctga ttgacctggg tctctccctt 240
 tgcactctcc ctacagtcct gggcatcttt tgggttgagg cacgagaaat tagccatgat 300


```

gcctgctttg ctcagctctt ttccattcac tgcttctcct tcctcgagtc ctctgtgcta 360
ctgtctatgg cctttgaccg ctttgtggct atctgccacc ccttgcacta tgtttccatt 420
ctcaccaaca cagtcattgg caggattggc ctgggtctctc tgggtcgtag tgtagcactc 480
atTTTTccat taccttttat gctcaaaaga ttcccttatt gtggctcccc agttctctca 540
cattcttatt gtctccacca agaagtgatg aaattggcct gtgccgacat gaaggccaac 600
agcatctacg gcatgtttgt catcgtctct acagtgggta tagactcact gctcatcttc 660
ttctcttatg ctctgatact gcgcaccgtg ctgtccatcg cctccagggc tgagagattc 720
aaggccctta acacctgtgt ttccacatc tgtgctgtgc tgctcttcta cactcccatg 780
attggcctct ctgtcatcca tcgctttgga aagcaggcac cccacctggt ccagggtggc 840
atgggtttca tgtatcttct ctttctctct gtgatgaatc ccattgtcta cagtgtgaag 900
accaaacaga tccgggatcg agtgacgcat gccttttggt actaa 945

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<210> 337
 <211> 302
 <212> PRT
 <213> Homo sapiens

<400> 337

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Met Thr Asn Leu Asn Ala Ser Gln Ala Asn His Arg Asn Phe Ile Leu
  1              5              10              15

```

```

Thr Gly Ile Pro Gly Thr Pro Asp Lys Asn Pro Trp Leu Ala Phe Pro
      20              25              30

```

```

Leu Gly Phe Leu Tyr Thr Leu Thr Leu Leu Gly Asn Gly Thr Ile Leu
      35              40              45

```

```

Ala Val Ile Lys Val Glu Pro Ser Leu His Glu Pro Thr Tyr Tyr Phe
      50              55              60

```

```

Leu Ser Ile Leu Ala Leu Thr Asp Val Ser Leu Ser Met Ser Thr Leu
      65              70              75              80

```

```

Pro Ser Met Leu Ser Ile Tyr Trp Phe Asn Ala Pro Gln Ile Val Phe
      85              90              95

```

```

Asp Ala Cys Ile Met Gln Met Phe Phe Ile His Val Phe Gly Ile Val
      100              105              110

```

```

Glu Ser Gly Val Leu Val Ser Met Ala Phe Asp Arg Phe Val Ala Ile
      115              120              125

```

```

Arg Asn Pro Leu His Tyr Val Ser Ile Leu Thr His Asp Val Ile Arg
      130              135              140

```

```

Lys Thr Gly Ile Ser Val Leu Thr Arg Ala Val Cys Val Val Phe Pro
      145              150              155              160

```

```

Val Pro Phe Leu Ile Lys Cys Leu Pro Phe Cys His Ser Asn Val Leu
      165              170              175

```

```

Ser His Ser Tyr Cys Leu His Gln Asn Met Met Arg Leu Ala Cys Ala
      180              185              190

```

```

Ser Thr Arg Ile Asn Ser Leu Tyr Gly Leu Ile Val Val Ile Phe Thr
      195              200              205

```

```

Leu Gly Leu Asp Val Leu Leu Thr Leu Leu Ser Tyr Val Leu Thr Leu
      210              215              220

```

Lys Thr Val Leu Gly Ile Val Ser Arg Gly Glu Arg Leu Lys Thr Leu
 225 230 235 240

Ser Thr Cys Leu Ser His Met Ser Thr Val Leu Leu Phe Tyr Val Pro
 245 250 255

Phe Met Gly Ala Ala Ser Met Ile His Arg Phe Trp Glu His Leu Ser
 260 265 270

Pro Val Val His Met Val Met Ala Asp Ile Tyr Leu Leu Leu Pro Pro
 275 280 285

Val Leu Asn Pro Ile Val Tyr Ser Val Lys Thr Lys Gln Ile
 290 295 300

<210> 338
 <211> 909
 <212> DNA
 <213> Homo sapiens

<400> 338
 atgacgaact tgaatgcatc acaggccaac caccgtaact tcattctgac aggtatccca 60
 ggaacgccag acaagaaccc atgggtggcc tttcccctgg gatttctcta cacactcaca 120
 ctccctgggaa atggtaccat cctagctgtc atcaagggtg agccaagtct ccatgagccc 180
 acgtattact tcctttctat cttggctctc actgacgtta gtctctccat gtccaccttg 240
 ccctccatgc tcagcatcta ctgggtttaat gccctcaga ttgtttttga tgcattgcac 300
 atgcagatgt tcttcatcca tgtatttgga atagtagaat caggagtcct agtggtccatg 360
 gcctttgaca gatttggtggc catccgaaac ccattacact atgtttccat cctcactcac 420
 gatgttattc gaaagactgg aatatctgtc ctcaccggg cagtctgtgt ggtattccct 480
 gtgcccttcc ttataaagtg cctacccttc tgccattcca atgtcttggt tcattcatac 540
 tgtcttcacc aaaacatgat gcggctagct tgtgccagca cccgcacaa cagcctctac 600
 ggctcatcg tcgtcatctt cacactgggg ctcgatgttc tcctcactct actgtcttat 660
 gtactcacc tgaagactgt gctgggcatt gtctccagag gtgaaaggct gaaaaccctc 720
 agcacatgcc tctctcacat gtctaccgtg ctcctcttct atgttccttt tatgggtgct 780
 gcctccatga tccacagatt ttgggagcat ttatcaccag tagtgcacat ggtcatggct 840
 gatataatac tactgtctcc gcctgtgcta aacccattg tctacagtgt gaagaccaag 900
 caaatttga 909

<210> 339
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 339
 Met Ser Thr Leu Pro Thr Gln Ile Ala Pro Asn Ser Ser Thr Ser Met
 1 5 10 15
 Ala Pro Thr Phe Leu Leu Val Gly Met Pro Gly Leu Ser Gly Ala Pro
 20 25 30
 Ser Trp Trp Thr Leu Pro Leu Ile Ala Val Tyr Leu Leu Ser Ala Leu
 35 40 45
 Gly Asn Gly Thr Ile Leu Trp Ile Ile Ala Leu Gln Pro Ala Leu His
 50 55 60
 Arg Pro Met His Phe Phe Leu Phe Leu Leu Ser Val Ser Asp Ile Gly
 65 70 75 80

Leu Val Thr Ala Leu Met Pro Thr Leu Leu Gly Ile Ala Leu Ala Gly
 85 90 95
 Ala His Thr Val Pro Ala Ser Ala Cys Leu Leu Gln Met Val Phe Ile
 100 105 110
 His Val Phe Ser Val Met Glu Ser Ser Val Leu Leu Ala Met Ser Ile
 115 120 125
 Asp Arg Ala Leu Ala Ile Cys Arg Pro Leu His Tyr Pro Ala Leu Leu
 130 135 140
 Thr Asn Gly Val Ile Ser Lys Ile Ser Leu Ala Ile Ser Phe Arg Cys
 145 150 155 160
 Leu Gly Leu His Leu Pro Leu Pro Phe Leu Leu Ala Tyr Met Pro Tyr
 165 170 175
 Cys Leu Pro Gln Val Leu Thr His Ser Tyr Cys Leu His Pro Asp Val
 180 185 190
 Ala Arg Leu Ala Cys Pro Glu Ala Trp Gly Ala Ala Tyr Ser Leu Phe
 195 200 205
 Val Val Leu Ser Ala Met Gly Leu Asp Pro Leu Leu Ile Phe Phe Ser
 210 215 220
 Tyr Gly Leu Ile Gly Lys Val Leu Gln Gly Val Glu Ser Arg Glu Asp
 225 230 235 240
 Arg Trp Lys Ala Gly Gln Thr Cys Ala Ala His Leu Ser Ala Val Leu
 245 250 255
 Leu Phe Tyr Ile Pro Met Ile Leu Leu Ala Leu Ile Asn His Pro Glu
 260 265 270
 Leu Pro Ile Thr Gln His Thr His Thr Leu Leu Ser Tyr Val His Phe
 275 280 285
 Leu Leu Pro Pro Leu Ile Asn Pro Ile Leu Tyr Ser Val Lys Met Lys
 290 295 300
 Glu Ile Arg Lys Arg Ile Leu Asn Arg Leu Gln Pro Arg Lys Val Gly
 305 310 315 320
 Gly Ala Gln

<210> 340
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 340
 atgtcaacat taccaactca gatagccccc aatagcagca cttcaatggc cccacaccttc 60
 ttgctgggtgg gcatgccagg cctatcaggt gcacctctct ggtggacatt gccctcatt 120
 gctgtctacc ttctctctgc actgggaaat ggcaccatcc tctggatcat tgccctgcag 180
 cccgccctgc accgccaat gcactcttc ctcttcttgc ttagtggtgc tgatattgga 240
 ttggtcactg cctgatgcc cacactgctg ggcacgccc ttgctgggtgc tcacactgtc 300
 cctgcctcag cctgccttct acagatggtt tttatccatg tcttttctgt catggagtcc 360

```

tctgtcttgc tgcctatgct cattgatcgg gcactggcca tctgcccagacc tctccactac 420
ccagcgctcc tcaccaatgg tgtaattagc aaaatcagcc tggccatttc ttttcgatgc 480
ctgggtctcc atctgcccct gccattcctg ctggcctaca tgcctactg cctcccacag 540
gtcctaaccct attcttattg ctgcatcca gatgtggctc gtttggcctg cccagaagct 600
tggggtgcag cctacagcct atttgtggtt ctttcagcca tgggtttgga cccctgctt 660
attttcttct cctatggcct gattggcaag gtgttgcaag gtgtggagtc cagagaggat 720
cgctggaagg ctggtcaaac ctgtgctgcc cacctctctg cagtgtcctt cttctatatc 780
cctatgatcc tcctggcact gattaaccat cctgagctgc caatcactca gcatacccat 840
actcttctat cctatgtcca tttccttctt cctccattga taaaccctat tctctatagt 900
gtcaagatga aggagattag aaagagaata ctcaacaggt tgcagcccag gaagggtggg 960
ggtgctcagt ga 972

```

<210> 341
 <211> 394
 <212> PRT
 <213> Homo sapiens

<400> 341

```

Met Phe Tyr Pro Ile Leu Asn Asp Ile Ser Thr Lys Asn Asn Ser Asn
  1              5              10              15

Ile Met Ser Cys Cys Asn Ile Leu Phe Ile Lys Thr Val Glu Ile Ile
          20              25              30

Leu Val Tyr Asn Gln Thr Gln Ser Pro Trp Tyr Pro Ile Val Pro Ser
          35              40              45

Lys Ser Leu Val Tyr Asn Asn Asn Thr Cys Phe Asp Cys Tyr His Leu
          50              55              60

Gln Arg Val Asp Cys Val Pro Ser Arg Asp His Ile Asn Gln Ser Met
          65              70              75              80

Val Leu Ala Ser Gly Asn Ser Ser Ser His Pro Val Ser Phe Ile Leu
          85              90              95

Leu Gly Ile Pro Gly Leu Glu Ser Phe Gln Leu Trp Ile Ala Phe Pro
          100             105             110

Phe Cys Ala Thr Tyr Ala Val Ala Val Val Gly Asn Ile Thr Leu Leu
          115             120             125

His Val Ile Arg Ile Asp His Thr Leu His Glu Pro Met Tyr Leu Phe
          130             135             140

Leu Ala Met Leu Ala Ile Thr Asp Leu Val Leu Ser Ser Ser Thr Gln
          145             150             155             160

Pro Lys Met Leu Ala Ile Phe Trp Phe His Ala His Glu Ile Gln Tyr
          165             170             175

His Ala Cys Leu Ile Gln Val Phe Phe Ile His Ala Phe Ser Ser Val
          180             185             190

Glu Ser Gly Val Leu Met Ala Met Ala Leu Asp Cys Tyr Val Ala Thr
          195             200             205

Cys Phe Pro Leu Arg His Ser Ser Ile Leu Thr Pro Ser Val Val Ile
          210             215             220

```

Lys Leu Gly Thr Ile Val Met Leu Arg Gly Leu Leu Trp Val Ser Pro
 225 230 235 240
 Phe Cys Phe Met Val Ser Arg Met Pro Phe Cys Gln His Gln Ala Ile
 245 250 255
 Pro Gln Ser Tyr Cys Glu His Met Ala Val Leu Lys Leu Val Cys Ala
 260 265 270
 Asp Thr Ser Ile Ser Arg Gly Tyr Gly Leu Phe Val Ala Phe Ser Val
 275 280 285
 Ala Gly Phe Asp Met Ile Val Ile Gly Met Ser Tyr Val Met Ile Leu
 290 295 300
 Arg Ala Val Leu Gln Leu Pro Ser Gly Glu Ala Arg Leu Lys Ala Phe
 305 310 315 320
 Ser Thr Arg Ala Ser His Ile Cys Val Ile Leu Ala Leu Tyr Ile Pro
 325 330 335
 Ala Leu Phe Ser Phe Leu Thr Tyr Arg Phe Gly His Asp Val Pro Arg
 340 345 350
 Val Val His Ile Leu Phe Ala Asn Leu Tyr Leu Leu Ile Pro Pro Met
 355 360 365
 Leu Asn Pro Ile Ile Tyr Gly Val Arg Thr Lys Gln Ile Gly Asp Arg
 370 375 380
 Val Ile Gln Gly Cys Cys Gly Asn Ile Pro
 385 390

<210> 342
 <211> 1185
 <212> DNA
 <213> Homo sapiens

<400> 342
 atgttctacc ccattttgaa tgacataagt acgaaaaaca acagtaacat catgtcatgt 60
 tgtaacatat tatttattaa aacagttgaa attattctag tttataatca aacccaatca 120
 ccctgggtatc caatagtccc atccaaaagc cttgtatata ataataacac ttgttttgat 180
 tgttatcatc tgcagagagt agattgcgtt cccagcagag accatattaa ccagtccatg 240
 gtgctggctt cagggaaacag ctcttctcat cctgtgtcct tcatcctgct tggaatccca 300
 ggccctggaga gtttccagtt gtggattgcc tttccgttct gtgccacgta tgctgtggct 360
 gttgttgga atataactct cctccatgta atcagaattg accacaccct gcatgagccc 420
 atgtacctct ttctggccat gctggccatc actgacctgg tcctctctc ctccactcaa 480
 cctaagatgt tggccatatt ctggtttcat gctcatgaga ttcagtacca tgccctgcctc 540
 atccaggtgt tcttcatcca tgccttttct tctgtggagt ctgggggtgct catggctatg 600
 gccctggact gctacgtggc tacctgcttc ccactccgac actctagcat cctgacccca 660
 tcggctcgtga tcaaaactggg gaccatcgtg atgctgagag ggctgctgtg ggtgagcccc 720
 ttctgcttca tgggtgtctag gatgcccttc tgccaacacc aagccattcc ccagtcatac 780
 tgtgagcaca tggctgtgct gaagttgggtg tgtgctgata caagcataag tcgtgggtat 840
 gggctctttg tggccttctc tgtggctggc tttgatatga ttgtcattgg tatgtcatac 900
 gtgatgattt tgagagctgt gcttcagttg cctcagggtg aagcccgct caaagctttt 960
 agcacacgtg cctcccatat ctgtgtcatc ttggctcttt atatcccagc ccttttttct 1020
 ttcttcacct accgcttttg ccatgatgtg ccccgagttg tacacatcct gtttgctaata 1080
 ctctatctac tgataacctc catgctcaac cccatcattt atggagttag aaccaaacag 1140
 atcggggaca gggttatcca aggatgttgt ggaaacatcc cctga 1185

<210> 343
<211> 311
<212> PRT
<213> Homo sapiens

<400> 343

Met	Ser	Asn	Ala	Ser	Leu	Val	Thr	Ala	Phe	Ile	Leu	Thr	Gly	Leu	Pro
1				5					10					15	
His	Ala	Pro	Gly	Leu	Asp	Ala	Leu	Leu	Phe	Gly	Ile	Phe	Leu	Val	Val
			20					25					30		
Tyr	Val	Leu	Thr	Val	Leu	Gly	Asn	Leu	Leu	Ile	Leu	Leu	Val	Ile	Arg
		35					40					45			
Val	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Thr	Asn	Leu
	50					55					60				
Ser	Phe	Ile	Asp	Met	Trp	Phe	Ser	Thr	Val	Thr	Val	Pro	Lys	Met	Leu
65					70					75					80
Met	Thr	Leu	Val	Ser	Pro	Ser	Gly	Arg	Ala	Ile	Ser	Phe	His	Ser	Cys
				85					90					95	
Val	Ala	Gln	Leu	Tyr	Phe	Phe	His	Phe	Leu	Gly	Ser	Thr	Glu	Cys	Phe
			100					105						110	
Leu	Tyr	Thr	Val	Met	Ser	Tyr	Asp	Arg	Tyr	Leu	Ala	Ile	Ser	Tyr	Pro
			115				120					125			
Leu	Arg	Tyr	Thr	Ser	Met	Met	Ser	Gly	Ser	Arg	Cys	Ala	Leu	Leu	Ala
	130					135					140				
Thr	Gly	Thr	Trp	Leu	Ser	Gly	Ser	Leu	His	Ser	Ala	Val	Gln	Thr	Ile
145					150					155					160
Leu	Thr	Phe	His	Leu	Pro	Tyr	Cys	Gly	Pro	Asn	Gln	Ile	Gln	His	Tyr
				165					170					175	
Phe	Cys	Asp	Ala	Pro	Pro	Ile	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Thr	Ser
			180					185					190		
Ala	Asn	Val	Met	Val	Ile	Phe	Val	Asp	Ile	Gly	Ile	Val	Ala	Ser	Gly
			195				200					205			
Cys	Phe	Val	Leu	Ile	Val	Leu	Ser	Tyr	Val	Ser	Ile	Val	Cys	Ser	Ile
	210					215					220				
Leu	Arg	Ile	Arg	Thr	Ser	Asp	Gly	Arg	Arg	Arg	Ala	Phe	Gln	Thr	Cys
225					230					235					240
Ala	Ser	His	Cys	Ile	Val	Val	Leu	Cys	Phe	Phe	Val	Pro	Cys	Val	Val
				245					250					255	
Ile	Tyr	Leu	Arg	Pro	Gly	Ser	Met	Asp	Ala	Met	Asp	Gly	Val	Val	Ala
			260					265					270		
Ile	Phe	Tyr	Thr	Val	Leu	Thr	Pro	Leu	Leu	Asn	Pro	Val	Val	Tyr	Thr
			275				280					285			

Leu Arg Asn Lys Glu Val Lys Lys Ala Val Leu Lys Leu Arg Asp Lys
 290 295 300

Val Ala His Pro Gln Arg Lys
 305 310

<210> 344
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 344
 atgtccaacg ccagcctcgt gacagcattc atcctcacag gccttcccca tgccccaggg 60
 ctggacgccc tcctctttgg aatcttctcg gtggtttacg tgctcactgt gctggggaac 120
 ctctcatcc tgctggtgat cagggtggat tctcacctcc acaccccat gtactacttc 180
 ctcaccaacc tgccttcat tgacatgtgg ttctccactg tcacggtgcc caaaatgctg 240
 atgaccttgg tgtcccaag cggcagggct atctccttcc acagctgcgt ggctcagctc 300
 tattttttcc acttcttggg gagcaccgag tgtttctct acacagtcac gtcctatgat 360
 cgctacttgg ccatcagtta cccgctcagg tacaccagca tgatgagtgg gagcaggtgt 420
 gccctcctgg ccaccggcac ttggctcagt ggctctctgc actctgctgt ccagaccata 480
 ttgactttcc atttgcccta ctgtggaccc aaccagatcc agcactactt ctgtgacgca 540
 ccgcccaccc tgaaactggc ctgtgcagac acctcagcca acgtgatggg catctttgtg 600
 gacattggga tagtggcctc aggcctgctt gtccctgata tgctgtccta tgtgtccatc 660
 gtctgttcca tcctgcggat ccgcacctca gatgggaggc gcagagcctt tcagacctgt 720
 gcctcccact gtattgtggg cctttgcttc tttgttccct gtgttgtcat ttatctgagg 780
 ccaggctcca tggatgccat ggatggagtt gtggccattt tctacactgt gctgacgccc 840
 cttctcaacc ctgttgtgta caccctgaga aacaaggagg tgaagaaagc tgtgttgaaa 900
 cttagagaca aagtagcaca tcctcagagg aaataa 936

<210> 345
 <211> 335
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Ala Gln Val Arg Ala Leu His Lys Ile Met Ala Leu Phe Ser Ala
 1 5 10 15
 Asn Ser Ile Gly Ala Met Asn Asn Ser Asp Thr Arg Ile Ala Gly Cys
 20 25 30
 Phe Leu Thr Gly Ile Pro Gly Leu Glu Gln Leu His Ile Trp Leu Ser
 35 40 45
 Ile Pro Phe Cys Ile Met Tyr Ile Ala Ala Leu Glu Gly Asn Gly Ile
 50 55 60
 Leu Ile Cys Val Ile Leu Ser Gln Ala Ile Leu His Glu Pro Met Tyr
 65 70 75 80
 Ile Phe Leu Ser Met Leu Ala Ser Ala Asp Val Leu Leu Ser Thr Thr
 85 90 95
 Thr Met Pro Lys Ala Leu Ala Asn Leu Trp Leu Gly Tyr Ser His Ile
 100 105 110
 Ser Phe Asp Gly Cys Leu Thr Gln Lys Phe Phe Ile His Phe Leu Phe
 115 120 125

Ile His Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala
 130 135 140
 Ile Cys Ser Pro Leu Arg Tyr Val Thr Ile Leu Thr Ser Lys Val Ile
 145 150 155 160
 Gly Lys Ile Val Thr Ala Thr Leu Ser Arg Ser Phe Ile Ile Met Phe
 165 170 175
 Pro Ser Ile Phe Leu Leu Glu His Leu His Tyr Cys Gln Ile Asn Ile
 180 185 190
 Ile Ala His Thr Phe Cys Glu His Met Gly Ile Ala His Leu Ser Cys
 195 200 205
 Ser Asp Ile Ser Ile Asn Val Trp Tyr Gly Leu Ala Ala Ala Leu Leu
 210 215 220
 Ser Thr Gly Leu Asp Ile Met Leu Ile Thr Val Ser Tyr Ile His Ile
 225 230 235 240
 Leu Gln Ala Val Phe Arg Leu Leu Ser Gln Asp Ala Arg Ser Lys Ala
 245 250 255
 Leu Ser Thr Cys Gly Ser His Ile Cys Val Ile Leu Leu Phe Tyr Val
 260 265 270
 Pro Ala Leu Phe Ser Val Phe Ala Tyr Arg Phe Gly Gly Arg Ser Ile
 275 280 285
 Pro Cys Tyr Val His Ile Leu Leu Ala Ser Leu Tyr Val Val Ile Pro
 290 295 300
 Pro Met Leu Asn Pro Val Ile Tyr Gly Val Arg Thr Lys Pro Ile Leu
 305 310 315 320
 Glu Gly Ala Lys Gln Met Phe Ser Asn Leu Ala Lys Gly Ser Lys
 325 330 335

<210> 346
 <211> 1008
 <212> DNA
 <213> Homo sapiens

<400> 346
 atggcacagg tgagggcgct gcataaaatc atggcccttt tttctgctaa cagcataggt 60
 gctatgaaca actctgacac tcgcatagca ggctgcttcc tcaactggcat ccctgggctg 120
 gagcaactac atatctggct gtccatcccc ttctgcatca tgtacatcgc tgccctggaa 180
 ggcaatggca tcctaatttg tgatcatctc tcccaggcaa tcctgcatga gcccatgtac 240
 atattcttat ctatgctggc cagtgtgat gtcttgcctc ctaccaccac catgcctaag 300
 gccctggcca atttgtggct aggttatagc cacatttcct ttgatggctg cctcactcaa 360
 aagttcttca ttcacttcct cttcattcac tctgctgtcc tgctggccat ggcctttgac 420
 cgctatgtgg ccactctgctc cccctgcca tatgtcaca tcctcacaag caaggtcatt 480
 gggaagatcg tcaactgccac cctgagccgc agcttcatca ttatgtttcc atccatcttt 540
 ctcttgagc acctgcaact ttgccagatc aacatcattg cacacacatt ttgtgagcac 600
 atgggcattg cccactgtgc ctgttctgat atctccatca atgtctggta tgggttgga 660
 gctgctcttc tctccacagg cctggacatc atgcttatta ctgtttccta catccacatc 720
 ctccaagcag tcttccgcct cctttctcaa gatgcccgct ccaaggccct gagtacctgt 780
 ggatcccata tctgtgtcat cctactcttc tatgtccctg cccttttttc tgtctttgcc 840
 tacaggtttg gtgggagaag catcccatgc tatgtccata ttctcctggc cagcctctac 900

gttgtcattc ctcctatgct caatcccgtt atttatggag tgaggactaa gccaatactg 960
 gaaggggcta agcagatggt ttcaaâtctt gccaaaggat ctaaataa 1008

<210> 347
 <211> 428
 <212> PRT
 <213> Homo sapiens

<400> 347

Met Phe Pro Ser Leu Cys Pro Cys Val Leu Leu Val Gln Leu Pro Leu
 1 5 10 15

Met Asn Glu Asn Met Gln Cys Phe Val Phe Cys Ser Cys Asp Ser Leu
 20 25 30

Leu Arg Met Met Val Ser Arg Phe Ile His Val Pro Phe Val Lys Met
 35 40 45

Lys Arg Ile Ile Val Gly Gly Tyr Ser Lys His Phe Phe Ser Asn Glu
 50 55 60

Leu Leu Cys Val Arg Pro Trp Ser Gly Lys Thr Trp Ser Ile Arg His
 65 70 75 80

His Ile Phe Asp Met Glu Leu Leu Thr Asn Asn Leu Lys Phe Ile Thr
 85 90 95

Asp Pro Phe Val Cys Arg Leu Arg His Leu Ser Pro Thr Pro Ser Glu
 100 105 110

Glu His Met Lys Asn Lys Asn Asn Val Thr Glu Phe Ile Leu Leu Gly
 115 120 125

Leu Thr Gln Asn Pro Glu Gly Gln Lys Val Leu Phe Val Thr Phe Leu
 130 135 140

Leu Ile Tyr Met Val Thr Ile Met Gly Asn Leu Leu Ile Ile Val Thr
 145 150 155 160

Ile Met Ala Ser Gln Ser Leu Gly Ser Pro Met Tyr Phe Phe Leu Ala
 165 170 175

Ser Leu Ser Phe Ile Asp Thr Val Tyr Ser Thr Ala Phe Ala Pro Lys
 180 185 190

Met Ile Val Asp Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Gln Gly
 195 200 205

Cys Met Ala Gln Leu Phe Met Asp His Leu Phe Ala Gly Ala Glu Val
 210 215 220

Ile Leu Leu Val Val Met Ala Tyr Asp Arg Tyr Met Ala Ile Cys Lys
 225 230 235 240

Pro Leu His Glu Leu Ile Thr Met Asn Arg Arg Val Cys Val Leu Met
 245 250 255

Leu Leu Ala Ala Trp Ile Gly Gly Phe Leu His Ser Leu Val Gln Phe
 260 265 270

Leu Phe Ile Tyr Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp Asn
 275 280 285
 Phe Leu Cys Asp Leu Tyr Pro Leu Leu Lys Leu Ala Cys Thr Asn Thr
 290 295 300
 Tyr Val Thr Gly Leu Ser Met Ile Ala Asn Gly Gly Ala Ile Cys Ala
 305 310 315 320
 Val Thr Phe Phe Thr Ile Leu Leu Ser Tyr Gly Val Ile Leu His Ser
 325 330 335
 Leu Lys Thr Gln Ser Leu Glu Gly Lys Arg Lys Ala Phe Tyr Thr Cys
 340 345 350
 Ala Ser His Val Thr Val Val Ile Leu Phe Phe Val Pro Cys Ile Phe
 355 360 365
 Leu Tyr Ala Arg Pro Asn Ser Thr Phe Pro Ile Asp Lys Ser Met Thr
 370 375 380
 Val Val Leu Thr Phe Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr
 385 390 395 400
 Leu Lys Asn Ala Glu Met Lys Ser Ala Met Arg Lys Leu Trp Ser Lys
 405 410 415
 Lys Val Ser Leu Ala Gly Lys Trp Leu Tyr His Ser
 420 425

<210> 348
 <211> 1287
 <212> DNA
 <213> Homo sapiens

<400> 348
 atgttccctt cccgtgtgtc atgtgtttct cttgttcaac tcccacttat gaatgagaac 60
 atgcagtgtt ttgtttttctg ttcttgtgat agtttgctga gaatgatggg tttccgcttc 120
 atccatgtcc catttgtaaa aatgaaaagg ataattgtgg gaggatattc taaacacttc 180
 ttttctaatt agctgctctg tgtgaggccc tggtcaggga aaacgtgggc gataaggcat 240
 cacatttttg acatggagct tctgacaaat aatctcaaat ttatcactga cccttttgtt 300
 ttagggtccc gacacctgag tccaacacct tcagaagaac acatgaaaaa taagaacaat 360
 gtgactgaat ttatcctctt agggctcaca cagaaccctg aggggcaaaa ggttttattt 420
 gtcacattct tactaatcta catgggtgacg ataatgggca acctgcttat catagtgacc 480
 atcatggcca gccagtcctt gggttccccc atgtactttt ttctggcttc tttatcattc 540
 atagataccg tctattctac tgcattttgt cccaaaatga ttgttgactt gctctctgag 600
 aaaaagacca tttcctttca gggttgtatg gctcaacttt ttatggatca tttatttgct 660
 ggtgctgaag tcattcttct ggtggtaatg gcctatgatc gatacatggc catctgtaag 720
 cctcttcatt aattgatcac catgaatcgt cgagtctgtg ttcttatgct gttggcggcc 780
 tggattggag gctttcttca ctcatgggtt caatttctct ttatttatca gctccctttc 840
 tgtggaccca atgtcattga caacttctct tgtgatttgt atcccttatt gaaacttgct 900
 tgcaccaata cctatgtcac tgggctttct atgatagcta atggaggagc gatttggtgct 960
 gtcaccttct tcaactatct gctttcctat ggggtcatat tacactctct taagactcag 1020
 agtttggaag ggaaacgaaa agctttctac acctgtgcat cccacgtcac tgtgggtcatt 1080
 ttattctttg tcccctgtat cttcttgtat gcaaggccca atttactttt tcccattgat 1140
 aaatccatga ctgtagttct aacttttata actcccatgc tgaaccactt aatctatacc 1200
 ctgaagaatg cagaaatgaa aagtgccatg aggaaacttt ggagtaaaaa agtaagctta 1260
 gctgggaaat ggctgtatca ctcatga 1287

<210> 349
<211> 298
<212> PRT
<213> Homo sapiens

<400> 349

Met	Gln	Gln	Asn	Asn	Ser	Val	Pro	Glu	Phe	Ile	Leu	Leu	Gly	Leu	Thr
1				5					10					15	
Gln	Asp	Pro	Leu	Arg	Gln	Lys	Ile	Val	Phe	Val	Ile	Phe	Leu	Ile	Phe
			20					25					30		
Tyr	Met	Gly	Thr	Val	Val	Gly	Asn	Met	Leu	Ile	Ile	Val	Thr	Ile	Lys
		35					40					45			
Ser	Ser	Arg	Thr	Leu	Gly	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Phe	Tyr	Leu
	50					55					60				
Ser	Phe	Ala	Asp	Ser	Cys	Phe	Ser	Thr	Ser	Thr	Ala	Pro	Arg	Leu	Ile
65					70					75					80
Val	Asp	Ala	Leu	Ser	Glu	Lys	Lys	Ile	Ile	Thr	Tyr	Asn	Glu	Cys	Met
				85					90					95	
Thr	Gln	Val	Phe	Ala	Leu	His	Leu	Phe	Gly	Cys	Met	Glu	Ile	Phe	Val
			100					105					110		
Leu	Ile	Leu	Met	Ala	Val	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu
		115					120					125			
Arg	Tyr	Pro	Thr	Ile	Met	Ser	Gln	Gln	Val	Cys	Ile	Ile	Leu	Ile	Val
	130					135					140				
Leu	Ala	Trp	Ile	Gly	Ser	Leu	Ile	His	Ser	Thr	Ala	Gln	Ile	Ile	Leu
145					150					155					160
Ala	Leu	Arg	Leu	Pro	Phe	Cys	Gly	Pro	Tyr	Leu	Ile	Asp	His	Tyr	Cys
				165					170					175	
Cys	Asp	Leu	Gln	Pro	Leu	Leu	Lys	Leu	Ala	Cys	Met	Asp	Thr	Tyr	Met
			180					185					190		
Ile	Asn	Leu	Leu	Leu	Val	Ser	Asn	Ser	Gly	Ala	Ile	Cys	Ser	Ser	Ser
		195					200					205			
Phe	Met	Ile	Leu	Ile	Ile	Ser	Tyr	Ile	Val	Ile	Leu	His	Ser	Leu	Arg
	210					215					220				
Asn	His	Ser	Ala	Lys	Gly	Lys	Lys	Lys	Ala	Leu	Ser	Ala	Cys	Thr	Ser
225					230					235					240
His	Ile	Ile	Val	Val	Ile	Leu	Phe	Phe	Gly	Pro	Cys	Ile	Phe	Ile	Tyr
			245						250					255	
Thr	Arg	Pro	Pro	Thr	Thr	Phe	Pro	Met	Asp	Lys	Met	Val	Ala	Val	Phe
			260					265					270		
Tyr	Thr	Ile	Gly	Thr	Pro	Phe	Leu	Asn	Pro	Leu	Ile	Tyr	Thr	Ser	Glu
		275					280					285			
Glu	Cys	Arg	Ser	Glu	Lys	Cys	His	Glu	Lys						

<210> 350
 <211> 895
 <212> DNA
 <213> Homo sapiens

<400> 350
 atgcagcaaa ataacagtgt gcctgaattc atactgtag gattaacaca ggatcccttg 60
 aggcagaaaa tagtgtttgt aatctttctta attttctata tgggaactgt ggtggggaat 120
 atgctcatta ttgtgaccat caagtccagc cggacactag gaagcccat gtacttcttt 180
 ctattttatt tgtcctttgc agattcttgc ttttcaactt ccacagcccc tagattaatt 240
 gtggatgctc tctctgaaaa gaaaattata acctacaatg agtgcacatg acaagtcttt 300
 gcactacatt tatttggtg catggagatc tttgtcctca ttctcatggc tgttgatcgc 360
 tatgtggcca tctgtaagcc cttgcgttac ccaaccatca tgagccagca ggtctgcac 420
 atcctgattg ttcttgctg gataggggtc ttaatacact ctacagctca gattatcctg 480
 gccttaagat tgcctttctg tggaccctat ttgattgatc attattgctg tgatttgcag 540
 cccttggtga aacttgctg catggacact tacatgatca acctgctgtt ggtgtctaac 600
 agtggggcaa tttgctcaag tagtttcatg attttgataa tttcatatat tgtcatcttg 660
 cattcactga gaaaccacag tgccaaaggg aagaaaaagg ctctctccgc ttgcacgtct 720
 cacataattg tagtcatctt attctttggc ccatgtatat tcatatatac acgcccccg 780
 accactttcc ccatggacaa gatggtggca gtattttata ctattggaac accctttctc 840
 aatccactca tctacacatc tgaggaatgc agaagtgaag aatgccatga gaaag 895

<210> 351
 <211> 306
 <212> PRT
 <213> Homo sapiens

<400> 351
 Met Gln Arg Ser Asn His Thr Val Thr Glu Phe Ile Leu Leu Gly Phe
 1 5 10 15
 Thr Thr Asp Pro Gly Met Gln Leu Gly Leu Phe Val Val Phe Leu Gly
 20 25 30
 Val Tyr Cys Leu Thr Val Val Gly Ser Ser Thr Leu Ile Val Leu Ile
 35 40 45
 Cys Asn Asp Ser Arg Leu His Thr Pro Met Tyr Phe Val Ile Gly Asn
 50 55 60
 Leu Ser Phe Leu Asp Leu Trp Tyr Ser Ser Val His Thr Pro Lys Ile
 65 70 75 80
 Leu Val Thr Cys Ile Ser Glu Asp Lys Ser Ile Ser Phe Ala Gly Cys
 85 90 95
 Leu Cys Gln Phe Phe Ser Ala Arg Leu Ala Tyr Ser Glu Cys Tyr Leu
 100 105 110
 Leu Ala Ala Met Ala Tyr Asp His Tyr Val Ala Ile Ser Lys Pro Leu
 115 120 125
 Leu Tyr Ala Gln Thr Met Pro Arg Arg Leu Cys Ile Cys Leu Val Leu
 130 135 140
 Tyr Ser Tyr Thr Gly Gly Phe Val Asn Ala Ile Ile Leu Thr Ser Asn
 145 150 155 160

Thr Phe Thr Leu Asp Phe Cys Gly Asp Asn Val Ile Asp Asp Phe Phe
 165 170 175
 Cys Asp Val Pro Pro Leu Val Lys Leu Ala Cys Ser Val Arg Glu Ser
 180 185 190
 Tyr Gln Ala Val Leu His Phe Leu Leu Ala Ser Asn Val Ile Ser Pro
 195 200 205
 Thr Val Leu Ile Leu Ala Ser Tyr Leu Ser Ile Ile Thr Thr Ile Leu
 210 215 220
 Arg Ile His Ser Thr Gln Gly Arg Ile Lys Val Phe Ser Thr Cys Ser
 225 230 235 240
 Ser His Leu Ile Ser Val Thr Leu Tyr Tyr Gly Ser Ile Leu Tyr Asn
 245 250 255
 Tyr Ser Arg Pro Ser Ser Ser Tyr Ser Leu Lys Arg Asp Lys Met Val
 260 265 270
 Ser Thr Phe Tyr Thr Met Leu Phe Pro Met Leu Asn Pro Met Ile Tyr
 275 280 285
 Ser Leu Arg Ser Lys Asp Met Lys Asp Ala Leu Lys Lys Phe Phe Lys
 290 295 300

Ser Ala
 305

<210> 352
 <211> 921
 <212> DNA
 <213> Homo sapiens

<400> 352
 atgcagagga gcaatcacac agtgactgag ttcatacctgc tgggcttcac cacagatcca 60
 gggatgcaac tgggcctctt tgtggtgttc ctgggtgtgt actgtctgac tgtggttagga 120
 agtagcacc tcatacgtgtt gatctgtaat gactcccgcc tacacacacc catgtatttt 180
 gtcattggaa atctgtcatt tctggatctc tgggtattctt ctgtccacac cccaaagatc 240
 ctagtgcct gcatactctga agacaaaagc atctcctttg ctggctgcct gtgtcagttc 300
 ttctctgcca ggctggccta tagtgagtgc tacctactgg ctgccatggc ttatgaccac 360
 tacgtggcca tctccaagcc cctgctttat gtcagacca tgccaaggag attgtgcatc 420
 tgtttggttt tatattccta tactgggggt tttgtcaatg caataatatt aaccagcaac 480
 acattcacat tggatttttg tggtgacaat gtcattgatg actttttctg tgatgttcca 540
 cccctcgtga agctggcatg cagtgtgaga gagagctacc aggctgtgct gcacttcctt 600
 ctggcctcca atgtcatctc cctactgtg ctcataccttg cctcttacct ctccatcatc 660
 accaccatcc tgaggatcca ctctacccag ggccgcatca aagtcttctc cacatgctcc 720
 tcccacctga tctccgttac cttatactat ggctccattc tctacaacta ctcccggcca 780
 agttccagct actccctcaa gagggacaaa atgggtttcta cctttttatac tatgtctgtc 840
 cccatgttga atcccatgat ctacagtctg aggagtaaag acatgaaaga cgctctgaaa 900
 aaattcttca agtcagcata a 921

<210> 353
 <211> 311
 <212> PRT
 <213> Homo sapiens

[illegible]

<210> 354
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 354
 atgactgggg gaggaatat tacagaaatc acctatttca tcttgctggg attctcagat 60
 tttcccagga tcataaaagt gctcttcact atattcctgg tgatctacat tacatctctg 120
 gcctggaacc tctccctcat tgttttaata aggatggatt cccacctcca tacacccatg 180
 tattttcttcc tcagtaacct gtccttcata gatgtctgct atatcagctc cacagtcccc 240
 aagatgctct ccaacctctt acaggaacag caaactatca cttttgttgg ttgtattatt 300
 cagtacttta tcttttcaac gatgggactg agtgagtctt gtctcatgac agccatggct 360
 tatgatcggt atgctgccat ttgtaacccc ctgctctatt catccatcat gtcacccacc 420
 ctctgtgttt ggatgggtact gggagcctac atgactggcc tcaactgcttc tttattccaa 480
 attggtgctt tgcttcaact ccacttctgt ggggtctaag tcatcagaca tttcttctgt 540
 gacatgcccc aactgttaat cttgtcctgt actgacactt tctttgtaca ggtcatgact 600
 gctatattaa ccatgttctt tgggatagca agtgccctag ttatcatgat atcctatggc 660
 tatattggca tctccatcat gaagatcact tcagctaaag gcagtcctaaa ggcattcaac 720
 acctgtgctt ctcatctaac agctgtttcc ctcttctata catcaggaat ctttgtctat 780
 ttgaggtcca gctctggagg ttcttcaagc tttgacagat ttgcatctgt tttctacact 840
 gtggtcattc ccatgttaaa tcccttgatt tacagtttga ggaacaaaga aattaaagat 900
 gccttaaaga ggttgcaaaa gagaaagtgc tgctga 936

<210> 355
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 355
 Met Glu Asn Asn Thr Glu Val Thr Glu Phe Ile Leu Val Gly Leu Thr
 1 5 10 15
 Asp Asp Pro Glu Leu Gln Ile Pro Leu Phe Ile Val Phe Leu Phe Ile
 20 25 30
 Tyr Leu Ile Thr Leu Val Gly Asn Leu Gly Met Ile Glu Leu Ile Leu
 35 40 45
 Leu Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60
 Ser Leu Val Asp Phe Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Met
 65 70 75 80
 Val Gly Phe Leu Thr Gly Asp Lys Phe Ile Leu Tyr Asn Ala Cys Ala
 85 90 95
 Thr Gln Phe Phe Phe Phe Val Ala Phe Ile Thr Ala Glu Ser Phe Leu
 100 105 110
 Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ala Ala Leu Cys Lys Pro Leu
 115 120 125
 His Tyr Thr Thr Thr Met Thr Thr Asn Val Cys Ala Cys Leu Ala Ile
 130 135 140
 Gly Ser Tyr Ile Cys Gly Phe Leu Asn Ala Ser Ile His Thr Gly Asn
 145 150 155 160

Thr Phe Arg Leu Ser Phe Cys Arg Ser Asn Val Val Glu His Phe Phe
 165 170 175
 Cys Asp Ala Pro Pro Leu Leu Thr Leu Ser Cys Ser Asp Asn Tyr Ile
 180 185 190
 Ser Glu Met Val Ile Phe Phe Val Val Gly Phe Asn Asp Leu Phe Ser
 195 200 205
 Ile Leu Val Ile Leu Ile Ser Tyr Leu Phe Ile Phe Ile Thr Ile Met
 210 215 220
 Lys Met Arg Ser Pro Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Ala
 225 230 235 240
 Ser His Leu Thr Ala Val Ser Ile Phe Tyr Gly Thr Gly Ile Phe Met
 245 250 255
 Tyr Leu Arg Pro Asn Ser Ser His Phe Met Gly Thr Asp Lys Met Ala
 260 265 270
 Ser Val Phe Tyr Ala Ile Val Ile Pro Met Leu Asn Pro Leu Val Tyr
 275 280 285
 Ser Leu Arg Asn Lys Glu Val Lys Ser Ala Phe Lys Lys Thr Val Gly
 290 295 300
 Lys Ala Lys Ala Ser Ile Gly Phe Ile Phe
 305 310

<210> 356
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 356
 atggagaaca acacagaggt gactgaattc atccttgtgg ggtaactga tgaccagaa 60
 ctgcagatcc cactcttcat agtcttccct ttcactctacc tcatcactct gggtgggaac 120
 ctggggatga ttgaattgat tctactggac tctgtctcc acaccccat gtacttcttc 180
 ctgagtaacc tctccctggg ggactttggg tattctcag ctgtcactcc caaggtgatg 240
 gtggggtttc tcacaggaga caaattcata ttatataatg cttgtgccac acaattcttc 300
 ttctttgtag cctttatcac tgcagaaagt ttctcctgg catcaatggc ctatgaccgc 360
 tatgcagcat tgtgtaaacc cctgcattac accaccacca tgacaacaaa tgtatgtgct 420
 tgcctggcca taggctccta catctgtggg ttctggaatg catccattca tactgggaac 480
 actttcaggc tctccttctg tagatccaat gtagttgaac actttttctg tgatgctcct 540
 cctctcttga ctctctcatg ttcagacaac tacatcagt agatgggtat tttttttgtg 600
 gtgggattca atgacctctt ttctatcctg gtaatcttga tctcctactt atttatattt 660
 atcaccatca tgaagatgcg ctcacctgaa ggacgccaga aggccttttc tacttgtgct 720
 tcccacctta ctgcagtttc catcttttat gggacaggaa tctttatgta cttacgacct 780
 aactccagcc atttcatggg cacagacaaa atggcatctg tgttctatgc catagtcatt 840
 cccatgttga atccactggg ctacagcctg aggaacaaag aggttaagag tgcctttaaa 900
 aagactgtag ggaaggcaaa ggcctctata ggattcatat tttaa 945

<210> 357
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 357

Met Glu Asn Lys Thr Glu Val Thr Gln Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Asn Asp Ser Glu Leu Gln Val Pro Leu Phe Ile Thr Phe Pro Phe Ile
 20 25 30
 Tyr Ile Ile Thr Leu Val Gly Asn Leu Gly Ile Ile Val Leu Ile Phe
 35 40 45
 Trp Asp Ser Cys Leu His Asn Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60
 Ser Leu Val Asp Phe Cys Tyr Ser Ser Ala Val Thr Pro Ile Val Met
 65 70 75 80
 Ala Gly Phe Leu Ile Glu Asp Lys Val Ile Ser Tyr Asn Ala Cys Ala
 85 90 95
 Ala Gln Met Tyr Ile Phe Val Ala Phe Ala Thr Val Glu Asn Tyr Leu
 100 105 110
 Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys Lys Pro Leu
 115 120 125
 His Tyr Thr Thr Thr Met Thr Thr Thr Val Cys Ala Arg Leu Ala Ile
 130 135 140
 Gly Ser Tyr Leu Cys Gly Phe Leu Asn Ala Ser Ile His Thr Gly Asp
 145 150 155 160
 Thr Phe Ser Leu Ser Phe Cys Lys Ser Asn Glu Val His His Phe Phe
 165 170 175
 Cys Asp Ile Pro Ala Val Met Val Leu Ser Cys Ser Asp Arg His Ile
 180 185 190
 Ser Glu Leu Val Leu Ile Tyr Val Val Ser Phe Asn Ile Phe Ile Ala
 195 200 205
 Leu Leu Val Ile Leu Ile Ser Tyr Thr Phe Ile Phe Ile Thr Ile Leu
 210 215 220
 Lys Met His Ser Ala Ser Val Tyr Gln Lys Pro Leu Ser Thr Cys Ala
 225 230 235 240
 Ser His Phe Ile Ala Val Gly Ile Phe Tyr Gly Thr Ile Ile Phe Met
 245 250 255
 Tyr Leu Gln Pro Ser Ser Ser His Ser Met Asp Thr Asp Lys Met Ala
 260 265 270
 Pro Val Phe Tyr Thr Met Val Ile Pro Met Leu Asn Pro Leu Val Tyr
 275 280 285
 Ser Leu Arg Asn Lys Glu Val Lys Ser Ala Phe Lys Lys Val Val Glu
 290 295 300
 Lys Ala Lys Leu Ser Val Gly Trp Ser Val
 305 310

<210> 358
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 358
 atggaaaata agacagaagt aacacaattc attcttctag gactaaccaa tgactcagaa 60
 ctgcagggtc ccctctttat aacgttcccc ttcatctata ttatcactct ggttggaac 120
 ctgggaatta ttgtattgat attctgggat tctgtctcc acaatcccat gtactttttt 180
 ctcagtaact tgtctctagt ggacttttgc tactcttcag ctgtcactcc catcgtcattg 240
 gctggattcc ttatagaaga caaggtcac tcttacaatg catgtgctgc tcaaattgat 300
 atctttgtag cttttgccac tgtggaaaat tacctcttgg cctcaatggc ctatgaccgc 360
 tatgcagcag tgtgcaaacc cctacattac accacaacca tgacaacaac tgtgtgtgct 420
 cgtctggcca taggctccta cctctgtggt ttctggaatg cctccatcca cactggggac 480
 acatttagtc tctctttctg taagtccaat gaagtccatc actttttctg tgatattcca 540
 gcagtcatgg ttctctcttg ctctgataga catattagcg agcttgttct tatttatgtt 600
 gtgagcttca atattctttat agctctctctg gttatcttga taccctacac attcattttt 660
 atcaccatcc taaagatgca ctcagcttca gtataccaga agccttgtc cacctgtgcc 720
 tctcatttca ttgcagtcgg catcttctat gggactatta tcttcattgta cttacaaccc 780
 agctccagtc actccatgga cacagacaaa atggcacctg tgttctatac aatgggtcatc 840
 cccatgctga accctctggt ctatagtctg aggaacaagg aagtgaagag tgcattcaag 900
 aaagtgttg agaaggcaaa attgtctgta ggatgggtcag tttaa 945

<210> 359
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 359
 Met Glu Arg Gln Asn Gln Ser Cys Val Val Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Ser Asn Tyr Pro Glu Leu Gln Gly Gln Leu Phe Val Ala Phe Leu
 20 25 30
 Val Ile Tyr Leu Val Thr Leu Ile Gly Asn Ala Ile Ile Ile Val Ile
 35 40 45
 Val Ser Leu Asp Gln Ser Leu His Val Pro Met Tyr Leu Phe Leu Leu
 50 55 60
 Asn Leu Ser Val Val Asp Leu Ser Phe Ser Ala Val Ile Met Pro Glu
 65 70 75 80
 Met Leu Val Val Leu Ser Thr Glu Lys Thr Thr Ile Ser Phe Gly Gly
 85 90 95
 Cys Phe Ala Gln Met Tyr Phe Ile Leu Leu Phe Gly Gly Ala Glu Cys
 100 105 110
 Phe Leu Leu Gly Ala Met Ala Tyr Asp Arg Phe Ala Ala Ile Cys His
 115 120 125
 Pro Leu Asn Tyr Gln Met Ile Met Asn Lys Gly Val Phe Met Lys Leu
 130 135 140
 Ile Ile Phe Ser Trp Ala Leu Gly Phe Met Leu Gly Thr Val Gln Thr
 145 150 155 160
 Ser Trp Val Ser Ser Phe Pro Phe Cys Gly Leu Asn Glu Ile Asn His

165	170	175
Ile Ser Cys Glu Thr Pro Ala Val Leu Glu Leu Ala Cys Ala Asp Thr		
180	185	190
Phe Leu Phe Glu Ile Tyr Ala Phe Thr Gly Thr Phe Leu Ile Ile Leu		
195	200	205
Val Pro Phe Leu Leu Ile Leu Leu Ser Tyr Ile Arg Val Leu Phe Ala		
210	215	220
Ile Leu Lys Met Pro Ser Thr Thr Gly Arg Gln Lys Ala Phe Ser Thr		
225	230	235
Cys Ala Ala His Leu Thr Ser Val Thr Leu Phe Tyr Gly Thr Ala Ser		
245	250	255
Met Thr Tyr Leu Gln Pro Lys Ser Gly Tyr Ser Pro Glu Thr Lys Lys		
260	265	270
Val Met Ser Leu Ser Tyr Ser Leu Leu Thr Pro Leu Leu Asn Leu Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Ser Glu Met Lys Arg Ala Leu Met Lys Leu		
290	295	300
Trp Arg Arg Arg Val Val Leu His Thr Ile		
305	310	

<210> 360
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 360
 atggaaagac aaaatcaaag ctgtgtgggt gaattcatcc tcttgggctt ttctaactat 60
 cctgagctcc aggggcagct ctttgtgggt ttcttggtta tttatctggt gaccctgata 120
 ggaaatgcc aattatagat catcgtctcc ctagaccaga gcctccacgt tcccatgtac 180
 ctgtttctcc tgaacttata tgtggtggac ctgagtttca gtgcagttat tatgcctgaa 240
 atgctgggtg tcctctctac tgaaaaaact acaatttctt ttgggggctg ttttgcacag 300
 atgtatttca tccttctttt tgggtggggt gaattgtttt ttctgggagc aatggcttat 360
 gaccgatttg ctgcaatttg ccatactctc aactacaaaa tgattatgaa taaaggagtt 420
 tttatgaaat taattatatt ttcattgggc ttaggtttta tgtaggtac tgttcaaaca 480
 tcatgggtat ctagttttcc cttttgtggc cttaatgaaa ttaaccatat atcttgtgaa 540
 accccagcag tgtagaact tgcattgtgc gacacgtttt tgtttgaaat ctatgcattc 600
 acaggcacct ttttgattat tttgggttct ttcttggtga tactcttgtc ttacattcga 660
 gttctgtttg ccatactgaa gatgccatca accactggga gacaaaaggc cttttccacc 720
 tgtgcccgtc acctcacatc tgtgacctc ttctatggca cagccagtat gacttattta 780
 caaccctaat ctggctactc accggaaaacc aagaaagtga tgtcattgtc ttactcactt 840
 ctgacaccac tgctgaatct gcttatctac agtttgcgaa atagtgaat gaagagggtc 900
 ttgatgaaat tatggcgaag gcgagtgggt ttacacacaa tctga 945

<210> 361
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ile Val Gln Leu Ile Cys Thr Val Cys Phe Leu Ala Val Asn Thr

1	5	10	15
Phe His Val Arg Ser Ser Phe Asp Phe Leu Lys Ala Asp Asp Met Gly	20	25	30
Glu Ile Asn Gln Thr Leu Val Ser Glu Phe Leu Leu Leu Gly Leu Ser	35	40	45
Gly Tyr Pro Lys Ile Glu Ile Val Tyr Phe Ala Leu Ile Leu Val Met	50	55	60
Tyr Leu Val Ile Leu Ile Gly Asn Gly Val Leu Ile Ile Ala Ser Ile	65	70	75
Phe Asp Ser His Phe His Thr Pro Met Tyr Phe Phe Leu Gly Asn Leu	85	90	95
Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ser Val Pro Ser Thr Leu	100	105	110
Val Ser Leu Ile Ser Lys Lys Arg Asn Ile Ser Phe Ser Gly Cys Ala	115	120	125
Val Gln Met Phe Phe Gly Phe Ala Met Gly Ser Thr Glu Cys Leu Leu	130	135	140
Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu	145	150	155
Arg Tyr Pro Ile Ile Leu Ser Lys Val Ala Tyr Val Leu Met Ala Ser	165	170	175
Val Ser Trp Leu Ser Gly Gly Ile Asn Ser Ala Val Gln Thr Leu Leu	180	185	190
Ala Met Arg Leu Pro Phe Cys Gly Asn Asn Ile Ile Asn His Phe Ala	195	200	205
Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile Ser Leu	210	215	220
Asn Ile Ile Thr Met Val Ile Ser Asn Met Ala Phe Leu Val Leu Pro	225	230	235
Leu Met Val Ile Phe Phe Ser Tyr Met Phe Ile Leu Tyr Thr Ile Leu	245	250	255
Gln Met Asn Ser Ala Thr Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser	260	265	270
Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe Phe Met	275	280	285
Tyr Ala Lys Pro Lys Ser Gln Asp Leu Ile Gly Glu Glu Lys Leu Gln	290	295	300
Ala Leu Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val Thr Pro Met	305	310	315
Leu Asn Pro Ile Leu Tyr Ser Leu Arg Asn Lys Asp Val Lys Ala Ala	325	330	335

Val Lys Tyr Leu Leu Asn Lys Lys Pro Ile His
 340 345

<210> 362
 <211> 1044
 <212> DNA
 <213> Homo sapiens

<400> 362
 atgattgttc agttaatttg tactgtttgt ttcttggcag taaatacatt tcatgttaga 60
 tcttcttttg atttcctgaa agcagatgac atgggtgaga ttaaccagac acttgtgtca 120
 gaatttcttc ttctgggtct ttctggatac ccaaagattg agattgttta ctttgctctc 180
 attctagtta tgtacctagt gattctaatt ggcaatgggtg ttctaatacat agccagcatc 240
 tttgattctc attttcacac accaatgtac ttcttctctg gcaacctctc tttcttggtat 300
 atctgctata catcctcctc tgttccctca acattgggtga gcttaatctc aaagaaaaga 360
 aacatttcct tctctggatg tgcagtgcag atgttctttg ggtttgcaat ggggtcaaca 420
 gaatgtctgc ttcttggcat gatggcattt gatcgttatg tggccatctg caaccactg 480
 agatacccca tcatcctgag caaggtggcg tatgtattga tggcttctgt gtcctgggtg 540
 tccggtggaa taaattcagc tgtgcaaaca ttacttgcca tgagactgcc tttctgtggg 600
 aataatatta tcaatcattt cgcatgtgaa atattagctg tcctcaagct ggctgtgct 660
 gatatatccc tcaatattat caccatgggtg atatcaaata tggccttctt ggttcttcca 720
 ctgatgggtca tttttttctc ctatatgttc atcctctaca ccatcttgca aatgaattca 780
 gccacaggaa gacgcaaggc attttccacg tgctcagctc acctgactgt ggtgatcata 840
 ttttacggta ccatcttctt tatgtatgcg aaaccgaagt ctcaagacct gattggggaa 900
 gaaaaattgc aagcattaga caagctcatt tctctgtttt atggggtagt gacacccatg 960
 ctgaatccta tactctatag cttgagaaat aaggatgtaa aagctgctgt aaaatatttg 1020
 ctgaacaaaa aaccaattca ctaa 1044

<210> 363
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 363
 Met Leu Glu Ser Asn Tyr Thr Met Pro Thr Glu Phe Leu Phe Val Gly
 1 5 10 15
 Phe Thr Asp Tyr Leu Pro Leu Arg Val Thr Leu Phe Leu Val Phe Leu
 20 25 30
 Leu Val Tyr Thr Leu Thr Met Val Gly Asn Ile Leu Leu Ile Ile Leu
 35 40 45
 Val Asn Ile Asn Ser Ser Leu Gln Ile Pro Met Tyr Tyr Phe Leu Ser
 50 55 60
 Asn Leu Ser Phe Leu Asp Ile Ser Cys Ser Thr Ala Ile Thr Pro Lys
 65 70 75 80
 Met Leu Ala Asn Phe Leu Ala Ser Arg Lys Ser Ile Ser Pro Tyr Gly
 85 90 95
 Cys Ala Leu Gln Met Phe Phe Phe Ala Ser Phe Ala Asp Ala Glu Cys
 100 105 110
 Leu Ile Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Thr Thr Leu Met Ser Arg Arg Val Cys Val Cys Phe
 130 135 140
 Ile Val Leu Ala Tyr Phe Ser Gly Ser Thr Thr Ser Leu Val His Val
 145 150 155 160
 Cys Leu Thr Phe Arg Leu Ser Phe Cys Gly Ser Asn Ile Val Asn His
 165 170 175
 Phe Phe Cys Asp Ile Pro Pro Leu Leu Ala Leu Ser Cys Thr Asp Thr
 180 185 190
 Gln Ile Asn Gln Leu Leu Leu Phe Ala Leu Cys Ser Phe Ile Gln Thr
 195 200 205
 Ser Thr Phe Val Val Ile Phe Ile Ser Tyr Phe Cys Ile Leu Ile Thr
 210 215 220
 Val Leu Ser Ile Lys Ser Ser Gly Gly Arg Ser Lys Thr Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Ile Ala Val Thr Leu Phe Tyr Gly Ala Leu Leu
 245 250 255
 Phe Met Tyr Leu Gln Pro Thr Thr Ser Tyr Ser Leu Asp Thr Asp Lys
 260 265 270
 Val Val Ala Val Phe Tyr Thr Val Val Phe Pro Met Phe Asn Pro Ile
 275 280 285
 Ile Tyr Ser Phe Arg Asn Lys Asp Val Lys Asn Ala Leu Lys Lys Leu
 290 295 300
 Leu Glu Arg Ile Gly Tyr Ser Asn Glu Trp Tyr Leu Asn Arg Leu Arg
 305 310 315 320

Ile Val Asn Ile

<210> 364
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 364
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 ctacctctca gattcacact gttcttggtta ttcttctgg tatatacatt aactatgggtc 120
 ggaaatatac tcttaataat tctagttaat attaattcaa gccttcaaatt tcccatgtat 180
 tattttctta gcaacttatac tttcttagac atcagctgtt ctacagcaat cactcctaaa 240
 atgctggcaa acttcttggc atccaggaaa agcatctctc cttatgggtg tgcactacaa 300
 atgtttttct tcgcttcttt tgctgatgct gaggcctta tcctggcagc aatggcttat 360
 gaccgctatg cagccatctg caaccactg ctctatacta cactgatgtc taggagagtc 420
 tgtgtctgct tcattgtgtt ggcatatttc agtggaaagta caacatcact ggtccatgtg 480
 tgcctcacat tcaggctgtc attttgtggc tccaatatcg tcaatcattt tttctgtgat 540
 atcccacctc ttctggcttt atcatgtaca gacactcaga tcaaccagct tctgctcttt 600
 gctttgtgca gcttcatcca gaccagcact ttgtggtaa tatttatttc ttacttctgc 660
 atcctcatca ctgtgttgag catcaagtcc tcagggtggca gaagcaaaac attctccact 720
 tgtgcttccc acctcatagc agtcacctta ttctatggag cgctcctgtt tatgtactta 780
 cagcccacca ctagctattc cctagacact gataagggtg tggcagtggt ttatactgtt 840
 gtatttccca tgtttaatcc aataatttat agtttcagaa acaaggatgt gaaaaatgct 900

ctcaaaaagc tattagaaag aattggatat tcaaataaat ggtattttaa tcgtttaaga 960
 atagtcaata tctaa 975

<210> 365
 <211> 334
 <212> PRT
 <213> Homo sapiens

<400> 365
 Met Cys Tyr Leu Ser Gln Leu Cys Leu Ser Leu Gly Glu His Thr Leu
 1 5 10 15
 His Met Gly Met Val Arg His Thr Asn Glu Ser Asn Leu Ala Gly Phe
 20 25 30
 Ile Leu Leu Gly Phe Ser Asp Tyr Pro Gln Leu Gln Lys Val Leu Phe
 35 40 45
 Val Leu Ile Leu Ile Leu Tyr Leu Leu Thr Ile Leu Gly Asn Thr Thr
 50 55 60
 Ile Ile Leu Val Ser Arg Leu Glu Pro Lys Leu His Met Pro Met Tyr
 65 70 75 80
 Phe Phe Leu Ser His Leu Ser Phe Leu Tyr Arg Cys Phe Thr Ser Ser
 85 90 95
 Val Ile Pro Gln Leu Leu Val Asn Leu Trp Glu Pro Met Lys Thr Ile
 100 105 110
 Ala Tyr Gly Gly Cys Leu Val His Leu Tyr Asn Ser His Ala Leu Gly
 115 120 125
 Ser Thr Glu Cys Val Leu Leu Ala Leu Met Ser Cys Asp Arg Tyr Val
 130 135 140
 Ala Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ile His Leu
 145 150 155 160
 Cys Met Ala Leu Ala Ser Met Ala Trp Leu Ser Gly Ile Ala Thr Thr
 165 170 175
 Leu Val Gln Ser Thr Leu Thr Leu Gln Leu Pro Phe Cys Gly His Arg
 180 185 190
 Gln Val Asp His Phe Ile Cys Glu Val Pro Val Leu Ile Lys Leu Ala
 195 200 205
 Cys Val Gly Thr Thr Phe Asn Glu Ala Glu Leu Phe Val Ala Ser Ile
 210 215 220
 Leu Phe Leu Ile Val Pro Val Ser Phe Ile Leu Val Ser Ser Gly Tyr
 225 230 235 240
 Ile Ala His Ala Val Leu Arg Ile Lys Ser Ala Thr Arg Arg Gln Lys
 245 250 255
 Ala Phe Gly Thr Cys Phe Ser His Leu Thr Val Val Thr Ile Phe Tyr
 260 265 270

Gly Thr Ile Ile Phe Met Tyr Leu Gln Pro Ala Lys Ser Arg Ser Arg
 275 280 285

Asp Gln Gly Lys Phe Val Ser Leu Phe Tyr Thr Val Val Thr Arg Met
 290 295 300

Leu Asn Pro Leu Ile Tyr Thr Leu Arg Ile Lys Glu Val Lys Gly Ala
 305 310 315 320

Leu Lys Lys Val Leu Ala Lys Ala Leu Gly Val Asn Ile Leu
 325 330

<210> 366
 <211> 1005
 <212> DNA
 <213> Homo sapiens

<400> 366
 atgtgttatc tttctcagct atgcctcagc cttggggaac acactttaca tatgggggatg 60
 gtgagacata ccaatgagag caacctagca ggtttcatcc ttttaggggtt ttctgattat 120
 cctcagttac agaaggttct atttgtgctc atattgattc tgtattttact aactattttg 180
 gggaatacca ccatcattct ggtttctcgt ctggaacca agcttcatat gccgatgtat 240
 ttcttccttt ctcatctctc ctctctgtac cgtcgttca ccagcagtgt tattccccag 300
 ctcttggttaa acctgtggga acccatgaaa actatcgctt atgggtggctg tttggttcac 360
 ctttacaact cccatgccct gggatccact gagtgcgtcc tcttggctct gatgtcctgt 420
 gaccgctatg tggctgtctg ccgtcctctc cattacactg tcttaatgca tatccatctc 480
 tgcattggcct tggcatctat ggcattggctc agtggaatag ccaccaccct ggtacagtcc 540
 accctcacc tgcagctgcc cttctgtggg catcgccaag tggatcattt catctgcgag 600
 gtccctgtgc tcatcaagct ggcttgtgtg ggcaccacgt ttaacgaggc tgagcttttt 660
 gtggctagta tccttttctt tatagtgcct gtctcattca tcttgggtctc ctctgggtac 720
 attgcccacg cagtgttgag gattaagtca gctaccagga gacagaaagc attcgggacc 780
 tgcttctccc acctgacagt ggtcaccatc ttttatggaa ccatcatctt catgtatctg 840
 cagccagcca agagtagatc cagggaccag ggcaagtttg tttctctctt ctacactgtg 900
 gtaacccgca tgcttaacct tcttatttat accttgagga tcaaggaggt gaaaggggca 960
 ttaaagaaag ttctagcaaa ggctctggga gtaaataatt tatga 1005

<210> 367
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Glu Asn Cys Thr Glu Val Thr Lys Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Ser Val Pro Glu Leu Gln Ile Pro Leu Phe Ile Leu Phe Thr Phe Ile
 20 25 30
 Tyr Leu Leu Thr Leu Cys Gly Asn Leu Gly Met Met Leu Leu Ile Leu
 35 40 45
 Met Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60
 Ser Leu Val Asp Phe Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Met
 65 70 75 80
 Ala Gly Phe Leu Arg Gly Asp Lys Val Ile Ser Tyr Asn Ala Cys Ala
 85 90 95

Val Gln Met Phe Phe Phe Val Ala Leu Ala Thr Val Glu Asn Tyr Leu
 100 105 110
 Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys Lys Pro Leu
 115 120 125
 His Tyr Thr Thr Thr Met Thr Ala Ser Val Gly Ala Cys Leu Ala Leu
 130 135 140
 Gly Ser Tyr Val Cys Gly Phe Leu Asn Ala Ser Phe His Ile Gly Gly
 145 150 155 160
 Ile Phe Ser Leu Ser Phe Cys Lys Ser Asn Leu Val His His Phe Phe
 165 170 175
 Cys Asp Val Pro Ala Val Met Ala Leu Ser Cys Ser Asp Lys His Thr
 180 185 190
 Ser Glu Val Ile Leu Val Phe Met Ser Ser Phe Asn Ile Phe Phe Val
 195 200 205
 Leu Leu Val Ile Phe Ile Ser Tyr Leu Phe Ile Phe Ile Thr Ile Leu
 210 215 220
 Lys Met His Ser Ala Lys Gly His Gln Lys Ala Leu Ser Thr Cys Ala
 225 230 235 240
 Ser His Phe Thr Ala Val Ser Val Phe Tyr Gly Thr Val Ile Phe Ile
 245 250 255
 Tyr Leu Gln Pro Ser Ser Ser His Ser Met Asp Thr Asp Lys Met Ala
 260 265 270
 Ser Val Phe Tyr Ala Met Ile Ile Pro Met Leu Asn Pro Val Val Tyr
 275 280 285
 Ser Leu Arg Asn Arg Glu Val Gln Asn Ala Phe Lys Lys Val Leu Arg
 290 295 300
 Arg Gln Lys Phe Leu
 305

<210> 368
 <211> 930
 <212> DNA
 <213> Homo sapiens

<400> 368
 atggagaatt gtacggaagt gacaaagttc attcttctag gactaaccag tgtcccagaa 60
 ctacagatcc ccctctttat cttgttcacc ttcactctacc tcctcactct gtgtgggaac 120
 ctggggatga tgttctctgat cctgatggac tcttgtctcc acaccccat gtactttttc 180
 ctacagtaacc tgtctctggt ggactttgga tactcctcag ctgtcactcc caaggctcatg 240
 gctgggttcc ttagaggaga caaggctcatc tcctacaatg catgtgctgt tcagatgttc 300
 ttctttgtag ccttgggccac ggtggaaaat tacttgttgg cctcaatggc ctatgaccgc 360
 tatgcagcag tgtgcaaacc cctacactac accaccacca tgacggccag tgtaggtgcc 420
 tgtctggccc taggctcata tgtctgtggc ttcctaaatg cctcattcca cattgggggc 480
 atattcagtc tctctttctg taaatccaat ctggtacatc actttttctg tgatgttcca 540
 gcagtcattg ctctgtcttg ctctgataaa cacactagtg aggtgattct gggttttatg 600
 tcaagcttta atatcttttt tgttcttcta gttatcttta tctcctactt gttcatattc 660

atcaccatct tgaagatgca ttcagctaag ggacaccaaa aagcattgtc cacctgtgcc 720
tctcacttca ctgcagtctc cgtcttctat gggacagtaa tcttcatcta cttgcagccc 780
agctccagcc actccatgga cacagacaaa atggcatctg tgttctatgc tatgatcatc 840
cccattgctga accctgtggt ctacagcctg aggaacagag aagtcagaa tgcattcaag 900
aaagtgttga gaaggcaaaa atttctataa 930

<210> 369
<211> 308
<212> PRT
<213> Homo sapiens

<400> 369
Met Asp Thr Gly Asn Lys Thr Leu Pro Gln Asp Phe Leu Leu Leu Gly
1 5 10 15
Phe Pro Gly Ser Gln Thr Leu Gln Leu Ser Leu Phe Met Leu Phe Leu
20 25 30
Val Met Tyr Ile Leu Thr Val Ser Gly Asn Val Ala Ile Leu Met Leu
35 40 45
Val Ser Thr Ser His Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60
Asn Leu Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Ala Val Pro Lys
65 70 75 80
Ala Leu Ala Ile Leu Leu Gly Arg Ser Gln Thr Ile Ser Phe Thr Ser
85 90 95
Cys Leu Leu Gln Met Tyr Phe Val Phe Ser Leu Gly Cys Thr Glu Tyr
100 105 110
Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Cys Leu Ala Ile Cys Tyr
115 120 125
Pro Leu His Tyr Gly Ala Ile Met Ser Ser Leu Leu Ser Ala Gln Leu
130 135 140
Ala Leu Gly Ser Trp Val Cys Gly Phe Val Ala Ile Ala Val Pro Thr
145 150 155 160
Ala Leu Ile Ser Gly Leu Ser Phe Cys Gly Pro Arg Ala Ile Asn His
165 170 175
Phe Phe Cys Asp Ile Ala Pro Trp Ile Ala Leu Ala Cys Thr Asn Thr
180 185 190
Gln Ala Val Glu Leu Val Ala Phe Val Ile Ala Val Val Val Ile Leu
195 200 205
Ser Ser Cys Leu Ile Thr Phe Val Ser Tyr Val Tyr Ile Ile Ser Thr
210 215 220
Ile Leu Arg Ile Pro Ser Ala Ser Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240
Cys Ser Ser His Leu Thr Val Val Leu Ile Trp Tyr Gly Ser Thr Val
245 250 255

Phe Leu His Val Arg Thr Ser Ile Lys Asp Ala Leu Asp Leu Ile Lys
 260 265 270

Ala Val His Val Leu Asn Thr Val Val Thr Pro Val Leu Asn Pro Phe
 275 280 285

Ile Tyr Thr Leu Arg Asn Lys Glu Val Arg Glu Thr Leu Leu Lys Lys
 290 295 300

Trp Lys Gly Lys
 305

<210> 370
 <211> 927
 <212> DNA
 <213> Homo sapiens

<400> 370
 atggacacag gcaacaaaaac tctgccccag gactttctct tactgggctt tcttggttct 60
 caaactcttc agctctctct ctttatgctt tttctggtga tgtacatcct cacagttagt 120
 ggtaaatgtg ctatcttgat gttggtgagc acctcccatc agttgcatac ccccatgtac 180
 ttctttctga gcaacctctc cttcctggag atttggtata ccacagcagc agtgcccaaa 240
 gcactggcca tctactggg gagaagtcag accatatcat ttacaagctg tcttttgcag 300
 atgtactttg ttttctcatt aggtgcaca gagtaacttc tctggcagc catggcttat 360
 gaccgctgtc ttgccatctg ctatccttta cactacggag ccacatgag tagcctgctc 420
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 gccctcatca gtggcctgtc cttctgtggc ccccgtgcca tcaaccactt cttctgtgac 540
 attgcaccct ggattgccct ggcctgcacc aacacacagg cagtagagct tgtggccttt 600
 gtgattgctg ttgtggttat cctgagttca tgcctcatca cctttgtctc ctatgtgtac 660
 atcatcagca ccacctcag gatccccctc gccagtggcc ggagcaaagc cttctccacg 720
 tgctcctcgc atctcaccgt ggtgctcatt tggatatggg ccacagtttt ctttcacgtc 780
 cgcacctcta tcaaagatgc cttggatctg atcaaagctg tccacgtcct gaacactgtg 840
 gtgactccag ttttaaacc cttcatctat acgcttcgta ataaggaagt aagagagact 900
 ctgctgaaga aatggaaggg aaaataa 927

<210> 371
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 371
 Met Thr Arg Lys Asn Tyr Thr Ser Leu Thr Glu Phe Val Leu Leu Gly
 1 5 10 15
 Leu Ala Asp Thr Leu Glu Leu Gln Ile Ile Leu Phe Leu Phe Phe Leu
 20 25 30
 Val Ile Tyr Thr Leu Thr Val Leu Gly Asn Leu Gly Met Ile Leu Leu
 35 40 45
 Ile Arg Ile Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60
 Asn Leu Ser Phe Val Asp Val Cys Asn Ser Thr Thr Ile Thr Pro Lys
 65 70 75 80
 Met Leu Ala Asp Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Ala Gly
 85 90 95

Cys Phe Leu Gln Met Tyr Phe Phe Ile Ser Leu Ala Thr Thr Glu Cys
 100 105 110
 Ile Leu Phe Gly Leu Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Arg
 115 120 125
 Pro Leu Leu Tyr Ser Leu Ile Met Ser Arg Thr Val Tyr Leu Lys Met
 130 135 140
 Ala Ala Gly Ala Phe Ala Ala Gly Leu Leu Asn Phe Met Val Asn Thr
 145 150 155 160
 Ser His Val Ser Ser Leu Ser Phe Cys Asp Ser Asn Val Ile His His
 165 170 175
 Phe Phe Cys Asp Ser Pro Pro Leu Phe Lys Leu Ser Cys Ser Asp Thr
 180 185 190
 Ile Leu Lys Glu Ser Ile Ser Ser Ile Leu Ala Gly Val Asn Ile Val
 195 200 205
 Gly Thr Leu Leu Val Ile Leu Ser Ser Tyr Ser Tyr Val Leu Phe Ser
 210 215 220
 Ile Phe Ser Met His Ser Gly Glu Gly Arg His Arg Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Ala Ile Ile Leu Phe Tyr Ala Thr Cys Ile
 245 250 255
 Tyr Thr Tyr Leu Arg Pro Ser Ser Ser Tyr Ser Leu Asn Gln Asp Lys
 260 265 270
 Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Ser Lys Glu Val Lys Lys Ala Leu Ala Asn Val
 290 295 300
 Ile Ser Arg Lys Arg Thr Ser Ser Phe Leu
 305 310

<210> 372
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 372
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 ctggagctac agattatcct ctttttggtt tttcttgta tttatacact tacagtactg 120
 ggaaatctcg ggatgatcct cttaatcagg atcgattccc agcttcacac acccatgtat 180
 ttcttctctg ctaacctgtc ctttggtggac gtttgtaact caactaccat caccctaaag 240
 atgctggcag atttattatc agagaagaaa accatctctt ttgctggctg cttcctacag 300
 atgtacttct ttatctccct ggcgacaacc gaatgcatcc tctttgggtt aatggcctat 360
 gacaggatag cggccatatg tcgcccgtg ctttactcct tgatcatgtc caggaccgtc 420
 tacctaaaaa tggcagccgg ggcttttgct gcagggttgc tgaacttcac ggtcaacaca 480
 agccatgtca gcagcttgct attctgtgac tccaatgtca tccatcactt cttctgtgac 540
 agtccccac ttttcaagct ctcttggtct gacacaatcc tgaaagaaag cataagttct 600
 attttggtg gtgtgaatat tgtggggact ctgcttgta tcctctctc ctactcctac 660
 gttctcttct ccattttttc tatgcattcg ggggagggga ggcacagagc tttctccacg 720

tgtgcctctc acctgacagc cataattctg ttctatgcc a cctgcatcta tacttacctg 780
 agacctagtt ccagctactc cctgaatcag gacaaagtgg cttctgtgtt ctacacagtg 840
 gtgattccca tgttgaatcc tctgatctac agcctcagga gtaaggaagt aaagaaggct 900
 ttagcgaatg taattagcag gaaaaggacc tcttcctttc tgtga 945

<210> 373
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 373
 Met Glu Trp Glu Asn His Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15
 Leu Ser Gly His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
 20 25 30
 Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45
 Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80
 Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Leu Ser Gly
 85 90 95
 Cys Ala Val Gln Met Phe Leu Gly Leu Ala Met Gly Thr Thr Glu Cys
 100 105 110
 Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asp Ala Tyr Val Pro Met
 130 135 140
 Ala Ala Gly Ser Trp Ile Ile Gly Ala Val Asn Ser Ala Val Gln Ser
 145 150 155 160
 Val Phe Val Val Gln Leu Pro Phe Cys Arg Asn Asn Ile Ile Asn His
 165 170 175
 Phe Thr Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 Ser Asp Asn Glu Phe Ile Met Leu Val Ala Thr Thr Leu Phe Ile Leu
 195 200 205
 Thr Pro Leu Leu Leu Ile Ile Val Ser Tyr Thr Leu Ile Ile Val Ser
 210 215 220
 Ile Phe Lys Ile Ser Ser Ser Glu Gly Arg Ser Lys Ala Ser Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
 245 250 255
 Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Thr Leu Asn Ser Asp Asp

260

265

270

Leu Asp Ala Thr Asp Lys Ile Ile Ser Met Phe Tyr Gly Val Met Thr
 275 280 285

Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Glu Ala Val Lys His Leu Leu Asn Arg Arg Phe Phe Ser Lys
 305 310 315

<210> 374

<211> 957

<212> DNA

<213> Homo sapiens

<400> 374

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ccaagacttg agttactctt ttttgtgctc atcttcataa tgtatgtggt catccttctg 120
gggaatggta ctctcatttt aatcagcatc ttggaccctc accttcacac ccctatgtac 180
ttctttctgg ggaacctctc cttcttggac atctgctaca ccaccacctc tattccctcc 240
acgctagtga gcttcctttc agaaagaaag accatttccc tttctggctg tgcagtgcag 300
atgttcctcg gcttgcccat ggggacaaca gagtgtgtgc ttctgggcat gatggccttt 360
gaccgctatg tggctatctg caacctctcg agatatccca tcatcatgag taaggatgcc 420
tatgtaccca tggcagctgg gtcttgatc ataggagctg tcaattctgc agtacaatca 480
gtgtttgtgg tacaattgcc tttctgcagg aataacatca tcaatcattt cacctgtgaa 540
attctggctg tcatgaaact ggctgtgct gacatctcag acaatgagtt catcatgctt 600
gtggccacaa cattgttcat attgacacct ttgttattaa tcattgtctc ttacacgtta 660
atcattgtga gcatcttcaa aattagctct tccgagggga gaagcaaagc ttctctacc 720
tggtcagccc atctgactgt ggtcataata ttctatggga ccatcctctt catgtacatg 780
aagcccaagt ctaaagagac acttaattcg gatgacttgg atgctaccga caaaattata 840
tccatgttct atggggtgat gactcccatg atgaatcctt taatctacag tcttagaaac 900
aaggatgtga aagaggcagt aaaacaccta ctgaacagaa gggtctttag caagtga 957

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<210> 375

<211> 318

<212> PRT

<213> Homo sapiens

<400> 375

Met Glu Trp Glu Asn His Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15

Leu Ser Gly His Pro Arg Leu Glu Leu Phe Phe Val Leu Ile Phe
 20 25 30

Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45

Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80

Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Leu Ser Gly
 85 90 95

Cys Ala Val Gln Met Phe Leu Ser Leu Ala Met Gly Thr Thr Glu Cys

100	105	110
Val Leu Leu Gly Val Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn		
115	120	125
Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asp Ala Tyr Val Pro Met		
130	135	140
Ala Ala Gly Ser Trp Ile Ile Gly Ala Val Asn Ser Ala Val Gln Thr		
145	150	155
Val Phe Val Val Gln Leu Pro Phe Cys Arg Asn Asn Ile Ile Asn His		
165	170	175
Phe Thr Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile		
180	185	190
Ser Gly Asn Glu Phe Ile Leu Leu Val Thr Thr Thr Leu Phe Leu Leu		
195	200	205
Thr Pro Leu Leu Leu Ile Ile Val Ser Tyr Thr Leu Ile Ile Leu Ser		
210	215	220
Ile Phe Lys Ile Ser Ser Ser Glu Gly Arg Ser Lys Pro Ser Ser Thr		
225	230	235
Cys Ser Ala Arg Leu Thr Val Val Ile Thr Phe Cys Gly Thr Ile Phe		
245	250	255
Leu Met Tyr Met Lys Pro Lys Ser Gln Glu Thr Leu Asn Ser Asp Asp		
260	265	270
Leu Asp Ala Thr Asp Lys Leu Ile Phe Ile Phe Tyr Arg Val Met Thr		
275	280	285
Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys		
290	295	300
Glu Ala Val Lys His Leu Leu Arg Arg Lys Asn Phe Asn Lys		
305	310	315

<210> 376
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 376
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 gggaatggta ctctcatttt aatcagcatc ttggaccctc accttcacac ccctatgtac 180
 ttctttctgg ggaacctctc cttcttggac atctgtctaca ccaccacctc tattccctcc 240
 acgctagtga gcttcctttc agaaagaaag accatttccc tttctggctg tgcagtgcag 300
 atgttcctca gcttggccat ggggacaaca gagtgtgtgc ttctgggcgt gatggccttt 360
 gaccgctatg tggctatctg caacctctg agatatccca tcatcatgag taaggatgcc 420
 tatgtaccca tggcagctgg gtcctggatc ataggagctg tcaattctgc agtacaacaa 480
 gtgtttgtgg tacaattgcc tttctgcagg aataacatca tcaatcattt cacctgtgaa 540
 attctagctg tcatgaaact ggcctgtgct gacatctcag gcaatgagtt catcctgctt 600
 gtgaccacaa cattgttctt attgacacct ttgttattaa ttattgtctc ttacacgtta 660
 atcattttga gcatcttcaa aattagctct tcggaggggg gaagcaaacc ttcctctacc 720
 tgctcagctc gtctgactgt ggtgataaca ttctgtggga ccatcttctt catgtacatg 780

aagcccaagt ctcaagagac acttaattca gatgacttgg atgccactga caaacttata 840
 ttcattattct acaggggtgat gactcccatg atgaatcctt taatctacag tcttagaaac 900
 aaggatgtga aggaggcagt aaaacaccta ctgagaagaa aaaatttttaa caagtaa 957

<210> 377
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 377
 Met Lys Arg Gln Asn Gln Ser Cys Val Val Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Ser Asn Phe Pro Glu Leu Gln Val Gln Leu Phe Gly Val Phe Leu
 20 25 30
 Val Ile Tyr Val Val Thr Leu Met Gly Asn Ala Ile Ile Thr Val Ile
 35 40 45
 Ile Ser Leu Asn Gln Ser Leu His Val Pro Met Tyr Leu Phe Leu Leu
 50 55 60
 Asn Leu Ser Val Val Glu Val Ser Phe Ser Ala Val Ile Thr Pro Glu
 65 70 75 80
 Met Leu Val Val Leu Ser Thr Glu Lys Thr Met Ile Ser Phe Val Gly
 85 90 95
 Cys Phe Ala Gln Met Tyr Phe Ile Leu Leu Phe Gly Gly Thr Glu Cys
 100 105 110
 Phe Leu Leu Gly Ala Met Ala Tyr Asp Arg Phe Ala Ala Ile Cys His
 115 120 125
 Pro Leu Asn Tyr Pro Val Ile Met Asn Arg Gly Val Phe Met Lys Leu
 130 135 140
 Val Ile Phe Ser Trp Ile Ser Gly Ile Met Val Ala Thr Val Gln Thr
 145 150 155 160
 Thr Trp Val Phe Ser Phe Pro Phe Cys Gly Pro Asn Glu Ile Asn His
 165 170 175
 Leu Phe Cys Glu Thr Pro Pro Val Leu Glu Leu Val Cys Ala Asp Thr
 180 185 190
 Phe Leu Phe Glu Ile Tyr Ala Phe Thr Gly Thr Ile Leu Ile Val Met
 195 200 205
 Val Pro Phe Leu Leu Ile Leu Leu Ser Tyr Ile Arg Val Leu Phe Ala
 210 215 220
 Ile Leu Lys Met Pro Ser Thr Thr Gly Arg Gln Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Ser Val Thr Leu Phe Tyr Gly Thr Ala Asn
 245 250 255
 Met Thr Tyr Leu Gln Pro Lys Ser Gly Tyr Ser Pro Glu Thr Lys Lys
 260 265 270

Leu Ile Ser Leu Ala Tyr Thr Leu Leu Thr Pro Leu Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Ser Glu Met Lys Arg Thr Leu Ile Lys Leu
290 295 300

Trp Arg Arg Lys Val Ile Leu His Thr Phe
305 310

<210> 378

<211> 945

<212> DNA

<213> Homo sapiens

<400> 378

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ggaaatgcca	tcattacagt	catcatctcc	ttaaaccaga	gcctccacgt	tcccatgtac	180
ctgttcctcc	tgaacctatc	tgtgggtggg	gtgagtttca	gtgcagtcac	tacgcctgaa	240
atgctgggtg	tgctctctac	tgagaaaact	atgatttctt	ttgtgggctg	ttttgcacag	300
atgtatttca	tccttctttt	tggtgggact	gaatgttttc	tcctgggagc	gatggcttat	360
gaccgatattg	ctgcaatttg	ccatcctctg	aactaccag	tgattatgaa	cagaggggtt	420
tttatgaaat	tagtaatat	ctcatggatc	tcagggatca	tggtggctac	tgtgcagacc	480
acttggggtat	ttagttttcc	attttgtggc	cccaatgaaa	ttaatcatct	cttctgtgag	540
actcccccg	tactagagct	tgtgtgtgca	gacaccttct	tatttgaaat	ctatgccttc	600
acaggcacca	ttttgattgt	tatggttcct	ttcttgttga	tcctcttgtc	ttacattcga	660
gttctgtttg	ccatcctgaa	gatgccatca	actactggga	gacaaaaggc	cttttccacc	720
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caaccctaat	ctggctactc	acccgaaacc	aagaaactga	tctcattggc	ttacacgttg	840
cttacccttc	tgctcaatcc	gctcatctat	agcttacgaa	acagtgagat	gaagaggact	900
ttgataaaac	tatggcggaag	aaaagtgatt	ttacacacat	tctga		945

<210> 379

<211> 309

<212> PRT

<213> Homo sapiens

<400> 379

Met Glu Lys Lys Lys Asn Val Thr Glu Phe Ile Leu Ile Gly Leu Thr
1 5 10 15

Gln Asn Pro Ile Met Glu Lys Val Thr Phe Val Val Phe Leu Val Leu
20 25 30

Tyr Met Ile Thr Leu Ser Gly Asn Leu Leu Ile Val Val Thr Ile Thr
35 40 45

Thr Ser Gln Ala Leu Ser Ser Pro Met Tyr Phe Phe Leu Thr His Leu
50 55 60

Ser Leu Ile Asp Thr Val Tyr Ser Ser Ser Ser Ala Pro Lys Leu Ile
65 70 75 80

Val Asp Ser Phe Gln Glu Lys Lys Ile Ile Ser Phe Asn Gly Cys Met
85 90 95

Ala Gln Ala Tyr Ala Glu His Ile Phe Gly Ala Thr Glu Ile Ile Leu
100 105 110

Leu Thr Val Met Ala Cys Asp Cys Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

Asn Tyr Thr Thr Ile Met Ser His Ser Leu Cys Ile Leu Leu Val Ala
130 135 140

Val Ala Trp Val Gly Gly Phe Leu His Ala Thr Ile Gln Ile Leu Phe
145 150 155 160

Thr Val Trp Leu Pro Phe Cys Gly Pro Asn Val Ile Gly His Phe Met
165 170 175

Cys Asp Leu Tyr Pro Leu Leu Lys Leu Val Cys Ile Asp Thr His Thr
180 185 190

Leu Gly Leu Phe Val Ala Val Asn Ser Gly Phe Ile Cys Leu Leu Asn
195 200 205

Phe Leu Ile Leu Val Val Ser Tyr Val Ile Ile Leu Arg Ser Leu Lys
210 215 220

Asn Asn Ser Leu Glu Gly Arg Cys Lys Ala Leu Ser Thr Cys Ile Ser
225 230 235 240

His Ile Ile Val Val Val Leu Phe Phe Val Pro Cys Ile Phe Val Tyr
245 250 255

Leu Arg Ser Val Thr Thr Leu Pro Ile Asp Lys Ala Val Ala Val Phe
260 265 270

Tyr Thr Met Val Val Pro Met Leu Asn Pro Val Val Tyr Thr Leu Arg
275 280 285

Asn Ala Glu Val Lys Ser Ala Ile Arg Lys Leu Trp Arg Lys Lys Val
290 295 300

Thr Ser Asp Asn Asp
305

<210> 380

<211> 930

<212> DNA

<213> Homo sapiens

<400> 380

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ctgctcattg tggttacat taccaccagc caggctctga gctcccccat gtacttcttc 180
ctgaccacc tttctttgat agacacagtt tattcttctt cttcagctcc taagttgatt 240
gtggattcct ttcaagagaa gaaaatcatc tcctttaatg ggtgtatggc tcaagcctat 300
gcagaacaca tttttggtgc tactgagatc atcctgctga cagtgtatggc ctgtgactgc 360
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ctcctggtgg cagtggcctg ggtgggagga tttcttcatg caactattca gattctcttt 480
acagtatggc tgcccttctg tggccccaat gtcataggcc acttcatgtg tgacttgtaac 540
ccattgttaa aacttgtttg catagacact catacccttg gtctctttgt tgctgtgaac 600
agtgggttta tctgcttatt aaacttccct atcttggtgg tatcctatgt gatcatcttg 660
agatctttta agaacaatag cttggagggg aggtgtaaag ccctctccac ctgtatttct 720
cacatcatag tagttgtctt attctttgtg ccctgtatat ttgtgtatct gcgctcagtg 780
accactctgc ccattgataa agctgttgct gtattttata ctatggtggg cccaatgtta 840
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aatcccgtagg tctacacact cagaaatgct gaggtaaaaa gtgcaataag gaagctttgg 900
 agaaaaaaaag tgacttcaga taatgattaa 930

<210> 381
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 381
 Met Glu Ser Glu Asn Arg Thr Val Ile Arg Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Leu Thr Gln Ser Gln Asp Ile Gln Leu Leu Val Phe Val Leu Val Leu
 20 25 30
 Ile Phe Tyr Phe Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
 35 40 45
 Ile Lys Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ala Phe Leu Asp Ala Ser Tyr Ser Phe Thr Val Ala Pro Arg
 65 70 75 80
 Met Leu Val Asp Phe Leu Ser Ala Lys Lys Ile Ile Ser Tyr Arg Gly
 85 90 95
 Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Gly Gly Glu Gly
 100 105 110
 Leu Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Pro Thr Val Met Asn Pro Arg Thr Cys Tyr Ala Met
 130 135 140
 Met Leu Ala Leu Trp Leu Gly Gly Phe Val His Ser Ile Ile Gln Val
 145 150 155 160
 Val Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn
 165 170 175
 Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Thr Asp Thr
 180 185 190
 Phe Val Val Glu Leu Leu Met Val Phe Asn Ser Gly Leu Met Thr Leu
 195 200 205
 Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys Arg
 210 215 220
 Ile Arg Gly Ser Ser Ser Glu Ala Lys Asn Lys Ala Met Ser Thr Cys
 225 230 235 240
 Ile Thr His Ile Ile Val Ile Phe Phe Met Phe Gly Pro Gly Ile Phe
 245 250 255
 Ile Tyr Thr Arg Pro Phe Arg Ala Phe Pro Ala Asp Lys Val Val Ser
 260 265 270

Leu Phe His Thr Val Ile Phe Pro Leu Leu Asn Pro Val Ile Tyr Thr
 275 280 285

Leu Arg Asn Gln Glu Val Lys Ala Ser Met Lys Lys Val Phe Asn Lys
 290 295 300

His Ile Ala
 305

<210> 382
 <211> 924
 <212> DNA
 <213> Homo sapiens

<400> 382
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 ggaaattttc tcattatttt caccataaag tcagaccctg ggctcacagc cccctctat 180
 ttctttctgg gcaacttggc cttcctggat gcatcctact ccttcactgt ggctccccgg 240
 atgttgggtg acttcctctc tgogaagaag ataatctcct acagaggctg catcactcag 300
 ctctttttct tgcacttctt tggaggaggg gagggattac tccttgttgt gatggccttt 360
 gaccgctaca tcgccatctg ccggcctctg cactatccta ctgtcatgaa ccctagaacc 420
 tgctatgcaa tgatgttggc tctgtggctt ggggggttttg tccactccat tatccagggtg 480
 gtcctcatcc tccgcttgcc tttttgtggc ccaaaccagc tggacaactt cttctgtgat 540
 gtccacagg tcataagct ggccctgcacc gacacatttg tgggtggagct tctgatggtc 600
 ttcaacagtg gcctgatgac actcctgtgc tttctggggc ttctggcctc ctatgcagtc 660
 attctttgtc gcatacgagg gtcttcttct gaggcacaaa acaaggccat gtccacgtgc 720
 atcacccata tcattgttat attcttcatg tttggacctg gcatcttcat ctacacgcgc 780
 cccttcaggg ctttcccagc tgacaagggtg gtttctctct tccacacagt gatttttctt 840
 ttgttgaatc ctgtcattta tacccttcgc aaccaggaag tgaaagcttc catgaaaaag 900
 gtgtttaata agcacatagc ctga 924

<210> 383
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 383
 Met Ala Asn Arg Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Glu Asn Pro Lys Met Gln Lys Ile Ile Phe Val Val Phe Ser Val Ile
 20 25 30
 Tyr Ile Asn Ala Met Ile Gly Asn Val Leu Ile Val Val Thr Ile Thr
 35 40 45
 Ala Ser Pro Ser Leu Arg Ser Pro Met Tyr Phe Phe Leu Ala Tyr Leu
 50 55 60
 Ser Phe Ile Asp Ala Cys Tyr Ser Ser Val Asn Thr Pro Lys Leu Ile
 65 70 75 80
 Thr Asp Ser Leu Tyr Glu Asn Lys Thr Ile Leu Phe Asn Gly Cys Met
 85 90 95
 Thr Gln Val Phe Gly Glu His Phe Phe Arg Gly Val Glu Val Ile Leu
 100 105 110

Leu Thr Val Met Ala Tyr Asp His Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125
 His Tyr Thr Thr Ile Met Lys Gln His Val Cys Ser Leu Leu Val Gly
 130 135 140
 Val Ser Trp Val Gly Gly Phe Leu His Ala Thr Ile Gln Ile Leu Phe
 145 150 155 160
 Ile Cys Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp His Phe Met
 165 170 175
 Cys Asp Leu Tyr Thr Leu Ile Asn Leu Ala Cys Thr Asn Thr His Thr
 180 185 190
 Leu Gly Leu Phe Ile Ala Ala Asn Ser Gly Phe Ile Cys Leu Leu Asn
 195 200 205
 Cys Leu Leu Leu Leu Val Ser Cys Val Val Ile Leu Tyr Ser Leu Lys
 210 215 220
 Thr His Ser Leu Glu Ala Arg His Glu Ala Leu Ser Thr Cys Val Ser
 225 230 235 240
 His Ile Thr Val Val Ile Leu Ser Phe Ile Pro Cys Ile Phe Val Tyr
 245 250 255
 Met Arg Pro Pro Ala Thr Leu Pro Ile Asp Lys Ala Val Ala Val Phe
 260 265 270
 Tyr Thr Met Ile Thr Ser Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
 275 280 285
 Asn Ala Gln Met Lys Asn Ala Ile Arg Lys Leu Cys Ser Arg Lys Ala
 290 295 300
 Ile Ser Ser Val Lys
 305

<210> 384
 <211> 930
 <212> DNA
 <213> Homo sapiens

<400> 384
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 gtgctcattg tgggcacat cactgccagc ccatcactga gatcccccatt gtactttttc 180
 ctggcctatc tctcctttat tgatgcctgc tattcctctg tcaatacccc taagctgac 240
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 ggagaacatt ttttcagagg tgttgaggtc atcctactta ctgtaatggc ctatgaccac 360
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 gctactttac ccattgataa agcagttgct gtattctaca ctatgataac ttctatgtta 840
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930

<210> 385
<211> 320
<212> PRT
<213> Homo sapiens

<400> 385
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Leu Ser Ala His Pro Lys Leu Gln Thr Val Phe Phe Val Leu Ile Leu
20 25 30
Trp Met Tyr Leu Met Ile Leu Leu Gly Asn Gly Val Leu Ile Ser Val
35 40 45
Ile Ile Phe Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Cys
50 55 60
Asn Leu Ser Phe Leu Asp Val Cys Tyr Thr Ser Ser Ser Val Pro Leu
65 70 75 80
Ile Leu Ala Ser Phe Leu Ala Val Lys Lys Lys Val Ser Phe Ser Gly
85 90 95
Cys Met Val Gln Met Phe Ile Ser Phe Ala Met Gly Ala Thr Glu Cys
100 105 110
Met Ile Leu Gly Thr Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Tyr
115 120 125
Pro Leu Arg Tyr Pro Val Ile Met Ser Lys Gly Ala Tyr Val Ala Met
130 135 140
Ala Ala Gly Ser Trp Val Thr Gly Leu Val Asp Ser Val Val Gln Thr
145 150 155 160
Ala Phe Ala Met Gln Leu Pro Phe Cys Ala Asn Asn Val Ile Lys His
165 170 175
Phe Val Cys Glu Ile Leu Ala Ile Leu Lys Leu Ala Cys Ala Asp Ile
180 185 190
Ser Ile Asn Val Ile Ser Met Thr Gly Ser Asn Leu Ile Val Leu Val
195 200 205
Ile Pro Leu Leu Val Ile Ser Ile Ser Tyr Ile Phe Ile Val Ala Thr
210 215 220
Ile Leu Arg Ile Pro Ser Thr Glu Gly Lys His Lys Ala Phe Ser Thr
225 230 235 240
Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe
245 250 255
Phe Met Tyr Ala Lys Pro Glu Ser Lys Ala Ser Val Asp Ser Gly Asn
260 265 270
Glu Asp Ile Ile Glu Ala Leu Ile Ser Leu Phe Tyr Gly Val Met Thr

275

280

285

Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Ala Ala Val Lys Asn Ile Leu Cys Arg Lys Asn Phe Ser Asp Gly Lys
 305 310 315 320

<210> 386

<211> 963

<212> DNA

<213> Homo sapiens

<400> 386

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tgctcagccc acctgacagt ggtgattata ttctatggaa ccatcttctt catgtacgca 780
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<210> 387

<211> 319

<212> PRT

<213> Homo sapiens

<400> 387

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  20 25 30
Leu Met Tyr Leu Ile Thr Leu Leu Gly Asn Ile Phe Leu Ile Ser Ile
  35 40 45
Thr Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser
  50 55 60
Asn Leu Ser Phe Leu Asp Ile Trp Tyr Ser Ser Ser Ala Leu Ser Pro
  65 70 75 80
Met Leu Ala Asn Phe Val Ser Gly Arg Asn Thr Ile Ser Phe Ser Gly
  85 90 95
Cys Ala Thr Gln Met Tyr Leu Ser Leu Ala Met Gly Ser Thr Glu Cys
  100 105 110
  
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Val Leu Leu Pro Met Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Arg Tyr Pro Val Ile Met Asn Arg Arg Thr Cys Val Gln Ile
 130 135 140
 Ala Ala Gly Ser Trp Met Thr Gly Cys Leu Thr Ala Met Val Glu Met
 145 150 155 160
 Met Ser Val Leu Pro Leu Ser Leu Cys Gly Asn Ser Ile Ile Asn His
 165 170 175
 Phe Thr Cys Glu Ile Leu Ala Ile Leu Lys Leu Val Cys Val Asp Thr
 180 185 190
 Ser Leu Val Gln Leu Ile Met Leu Val Ile Ser Val Leu Leu Leu Pro
 195 200 205
 Met Pro Met Leu Leu Ile Cys Ile Ser Tyr Ala Phe Ile Leu Ala Ser
 210 215 220
 Ile Leu Arg Ile Ser Ser Val Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Thr Ala His Leu Met Val Val Val Leu Phe Tyr Gly Thr Ala Leu
 245 250 255
 Ser Met His Leu Lys Pro Ser Ala Val Asp Ser Gln Glu Ile Asp Lys
 260 265 270
 Phe Met Ala Leu Val Tyr Ala Gly Gln Thr Pro Met Leu Asn Pro Ile
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Val Ala Leu Lys Lys Leu
 290 295 300
 Leu Ile Arg Asn His Phe Asn Thr Ala Phe Ile Ser Ile Leu Lys
 305 310 315

<210> 388
 <211> 960
 <212> DNA
 <213> Homo sapiens

<400> 388
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 ggcaacattt ttctgatctc catcaccatt ctagattccc acctgcacac ccctatgtac 180
 ctcttctcga gcaatctctc ctttctggac atctggtact cctcttctgc cctctctcca 240
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 gaccggtatg tggccatctg caacccccctg agataccctg tcatcatgaa taggagaacc 420
 tgtgtgcaga ttgcagctgg ctctctggatg acaggctgtc tcaactgcat ggtggaaatg 480
 atgtctgtgc tgccactgtc tctctgtggt aatagcatca tcaatcattt cacttgtgaa 540
 attctggcca tcttgaaatt ggtttgtgtg gacacctccc tgggtgcagtt aatcatgctg 600
 gtgatcagtg tacttcttct ccccatgcca atgtactca tttgtatctc ttatgcattt 660
 atcctcgcca gtatcctgag aatcagctca gtggaaggct gaagtaaagc cttttcaacg 720
 tgcacagccc acctgatggt ggtagttttg ttctatggga cggctctctc catgcacctg 780
 aagccctccg ctgtagattc acaggaaata gacaaattta tggctttggt gtatgccgga 840

caaacccccca tgttgaatcc tatcatctat agtctacgga acaaagaggt gaaagtggcc 900
 ttgaaaaaat tgctgattag aaatcatttt aatactgcct tcatttccat cctcaaataa 960

<210> 389
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 389
 Met Asp Lys Ile Asn Gln Thr Phe Val Arg Glu Phe Ile Leu Leu Gly
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 20 25 30
 Val Met Tyr Val Val Ile Leu Ile Gly Asn Gly Val Leu Ile Ile Ala
 35 40 45
 Ser Ile Leu Asp Ser Arg Leu His Met Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Ile Pro Ser
 65 70 75 80
 Thr Leu Val Ser Leu Ile Ser Lys Lys Arg Asn Ile Ser Phe Ser Gly
 85 90 95
 Cys Ala Val Gln Met Phe Phe Gly Phe Ala Met Gly Ser Thr Glu Cys
 100 105 110
 Phe Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Arg Tyr Pro Ile Ile Met Asn Lys Val Val Tyr Val Leu Leu
 130 135 140
 Thr Ser Val Ser Trp Leu Ser Gly Gly Ile Asn Ser Thr Val Gln Thr
 145 150 155 160
 Ser Leu Ala Met Arg Trp Pro Phe Cys Gly Asn Asn Ile Ile Asn His
 165 170 175
 Phe Leu Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ser Asp Ile
 180 185 190
 Ser Val Asn Ile Val Thr Leu Ala Val Ser Asn Ile Ala Phe Leu Val
 195 200 205
 Leu Pro Leu Leu Val Ile Phe Phe Ser Tyr Met Phe Ile Leu Tyr Thr
 210 215 220
 Ile Leu Arg Thr Asn Ser Ala Thr Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe
 245 250 255
 Phe Met Tyr Ala Lys Pro Lys Ser Gln Asp Leu Leu Gly Lys Asp Asn
 260 265 270

Leu Gln Ala Thr Glu Gly Leu Val Ser Met Phe Tyr Gly Val Val Thr
 275 280 285

Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Ala Ala Ile Lys Tyr Leu Leu Ser Arg Lys Ala Ile Asn Gln
 305 310 315

<210> 390
 <211> 957
 <212> DNA
 <213> Homo sapiens

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 ggcaatggtg ttctgatcat agcaagcatc ttggattctc gtcttcacat gcccatgtac 180
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 acactgggtga gcttaatctc aaagaaaaga aacatttcct tctctggatg tgcagtgcag 300
 atgttctttg ggtttgcaat ggggtcaaca gaatgtttcc tccttggcat gatggcattt 360
 gatcgttatg tggccatctg taacctctg agatacccca tcatcatgaa caagggtggtg 420
 tatgtactgc tgacttctgt atcatggctt tctgggtggaa tcaattcaac tgtgcaaaca 480
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<210> 391
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 391
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 35 40 45
 Ile Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 Thr His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Val Thr Pro
 65 70 75 80
 Lys Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Thr Gly
 85 90 95
 Cys Phe Ala Gln Met Phe Cys Phe Val Phe Leu Gly Thr Ala Glu Cys
 100 105 110

Tyr Leu Leu Ser Ser Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Ser
 115 120 125
 Pro Leu His Tyr Thr Val Ile Met Pro Lys Arg Leu Cys Leu Ala Leu
 130 135 140
 Ile Thr Gly Pro Tyr Val Ile Gly Phe Met Asp Ser Phe Val Asn Val
 145 150 155 160
 Val Ser Met Ser Arg Leu His Phe Cys Asp Ser Asn Ile Ile His His
 165 170 175
 Phe Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Thr Asp Thr
 180 185 190
 Asp Asn Thr Glu Met Leu Ile Phe Ile Ile Ala Gly Ser Thr Leu Met
 195 200 205
 Val Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr
 210 215 220
 Ile Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Val Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile
 245 250 255
 Phe Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln
 260 265 270
 Val Ala Pro Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Arg Glu Val Lys Asn Ala Leu Ile Arg Val
 290 295 300
 Met Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 392
 <211> 939
 <212> DNA
 <213> Homo sapiens

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 ctggggaatg tggggatgct attgataatc cgcctggacc tccagcttca cactcccatg 180
 tattttttcc ttactcacct gtcattttatt gacctcagtt actcaactgt cgtcacacct 240
 aaaaccttag cgaacttact gacttccaac tatatttcct tcacgggctg ctttgcccag 300
 atgttctgtt ttgtcttctt ggggtactgct gaatgttatc ttctctctc aatggcctat 360
 gatcgctatg cagcgatctg cagtcctcta cactacacag ttattatgcc caaaaggctc 420
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939

<210> 393

<211> 312

<212> PRT

<213> Homo sapiens

<400> 393

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			20					25					30		

Leu	Leu	Ile	Tyr	Leu	Ile	Thr	Met	Leu	Gly	Asn	Val	Gly	Met	Ile	Leu
		35					40					45			

Ile	Ile	Arg	Leu	Asp	Leu	Gln	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu
	50					55					60				

Thr	His	Leu	Ser	Phe	Ile	Asp	Leu	Ser	Tyr	Ser	Thr	Val	Val	Thr	Pro
65					70					75					80

Lys	Thr	Leu	Ala	Asn	Leu	Leu	Thr	Ser	Asn	Tyr	Ile	Ser	Phe	Thr	Gly
				85					90						95

Cys	Phe	Ala	Gln	Met	Phe	Phe	Phe	Ala	Phe	Leu	Gly	Thr	Ala	Glu	Cys
			100					105					110		

Tyr	Leu	Leu	Ser	Ser	Met	Ala	His	Asp	Arg	Tyr	Ala	Ala	Ile	Cys	Ser
		115					120					125			

Pro	Leu	His	Tyr	Thr	Val	Ile	Met	Ser	Lys	Arg	Leu	Cys	Leu	Ala	Leu
	130					135					140				

Ile	Thr	Gly	Pro	Tyr	Val	Ile	Gly	Phe	Ile	Asp	Ser	Phe	Val	Asn	Val
145					150					155					160

Val	Ser	Met	Ser	Arg	Leu	His	Phe	Tyr	Asp	Ser	Asn	Val	Ile	His	His
				165					170					175	

Phe	Phe	Cys	Asp	Thr	Ser	Pro	Ile	Leu	Ala	Leu	Ser	Cys	Thr	Asp	Thr
			180					185					190		

Tyr	Asn	Thr	Glu	Ile	Leu	Ile	Phe	Ile	Ile	Val	Gly	Ser	Thr	Leu	Met
	195						200					205			

Val	Ser	Leu	Phe	Thr	Ile	Ser	Ala	Ser	Tyr	Val	Phe	Ile	Leu	Phe	Thr
	210					215					220				

Ile	Leu	Lys	Ile	Asn	Ser	Thr	Ser	Gly	Lys	Gln	Lys	Ala	Phe	Ser	Thr
225				230						235					240

Cys	Val	Ser	His	Leu	Leu	Gly	Val	Thr	Ile	Phe	Tyr	Ser	Thr	Leu	Ile
				245					250					255	

Phe	Thr	Tyr	Leu	Lys	Pro	Arg	Lys	Ser	Tyr	Ser	Leu	Gly	Arg	Asp	Gln
			260					265					270		

Val	Ala	Ser	Val	Phe	Tyr	Thr	Ile	Val	Ile	Pro	Val	Leu	Asn	Pro	Leu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

275

280

285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Val Ile Arg Val
 290 295 300

Met Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 394

<211> 939

<212> DNA

<213> Homo sapiens

<400> 394

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tattttttcc ttactcacct gtcattttatt gacctcagtt actcaactgt cgtcacacct 240
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gatcgctatg cagcgatctg cagtcctcta cactacacag ttattatgtc caaaaggctc 420
tgcctcgctc tcatactagg gccttatgtg attggcttta tagactcctt tgtcaacgtg 480
gtttccatga gcagattgca tttctacgac tcaaacgtaa ttcatacactt tttctgtgac 540
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aaaccaagaa agtcttattc cttgggaaga gatcaagtgg cttctgtttt ttatactatt 840
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<210> 395

<211> 310

<212> PRT

<213> Homo sapiens

<400> 395

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Phe Ala Asn His Pro Glu Leu Gln Val Ser Leu Phe Leu Met Phe Leu
  20 25 30
Phe Ile Tyr Leu Phe Thr Val Leu Gly Asn Leu Gly Leu Ile Thr Leu
  35 40 45
Ile Arg Met Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
  50 55 60
Asn Leu Ala Phe Ile Asp Ile Phe Tyr Ser Ser Thr Val Thr Pro Lys
  65 70 75 80
Ala Leu Val Asn Phe Gln Ser Asn Arg Arg Ser Ile Ser Phe Val Gly
  85 90 95
Cys Phe Val Gln Met Tyr Phe Phe Val Gly Leu Val Cys Cys Glu Cys
  100 105 110
Phe Leu Leu Gly Ser Met Ala Tyr Asn Arg Tyr Ile Ala Ile Cys Asn

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115	120	125
Pro Leu Leu Tyr Ser Val Val Met Ser Gln Lys Val Ser Asn Trp Leu		
130	135	140
Gly Val Met Pro Tyr Val Ile Gly Phe Thr Ser Ser Leu Ile Ser Val		
145	150	155
Trp Val Ile Ser Ser Leu Ala Phe Cys Asp Ser Ser Ile Asn His Phe		
	165	170
Phe Cys Asp Thr Thr Ala Leu Leu Ala Leu Ser Cys Val Asp Thr Phe		
	180	185
Gly Thr Glu Met Val Ser Phe Val Leu Ala Gly Phe Thr Leu Leu Ser		
	195	200
Ser Leu Leu Ile Ile Thr Val Thr Tyr Ile Ile Ile Ile Ser Ala Ile		
	210	215
Leu Arg Ile Gln Ser Ala Ala Gly Arg Gln Lys Ala Phe Ser Thr Cys		
	225	230
Ala Ser His Leu Met Ala Val Thr Ile Phe Tyr Gly Ser Leu Ile Phe		
	245	250
Thr Tyr Leu Gln Pro Asp Asn Thr Ser Ser Leu Thr Gln Ala Gln Val		
	260	265
Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile		
	275	280
Tyr Ser Leu Arg Asn Lys Asp Val Lys Asn Ala Leu Leu Arg Val Ile		
	290	295
His Arg Lys Leu Phe Pro		
305	310	

<210> 396
 <211> 933
 <212> DNA
 <213> Homo sapiens

<400> 396

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gcattgggtga	atttccaatc	caatcggaga	tccatctcct	ttgttggctg	ctttgttcaa	300
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attcccattgc	tgaatccact	catctacagt	ctgaggaaca	aagatgtgaa	aaatgctctt	900
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<210> 397
<211> 350
<212> PRT
<213> Homo sapiens

<400> 397

Met	Asn	Ser	Leu	Gly	Lys	Leu	Val	Ser	Met	Ile	Leu	Ser	Ala	His	Val
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			20					25					30		
Ala	Leu	Gly	Ala	Asp	Pro	Pro	Gly	Gly	Met	Gly	Leu	Gly	Asn	Glu	Ser
		35					40					45			
Ser	Leu	Met	Asp	Phe	Ile	Leu	Leu	Gly	Phe	Ser	Asp	His	Pro	Arg	Leu
	50					55					60				
Glu	Ala	Val	Leu	Phe	Val	Phe	Val	Leu	Phe	Phe	Tyr	Leu	Leu	Thr	Leu
65					70					75					80
Val	Gly	Asn	Phe	Thr	Ile	Ile	Ile	Ile	Ser	Tyr	Leu	Asp	Pro	Pro	Leu
				85					90					95	
His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser	Asn	Leu	Ser	Leu	Leu	Asp	Ile
			100					105						110	
Cys	Phe	Thr	Thr	Ser	Leu	Ala	Pro	Gln	Thr	Leu	Val	Asn	Leu	Gln	Arg
		115					120					125			
Pro	Lys	Lys	Thr	Ile	Thr	Tyr	Gly	Gly	Cys	Val	Ala	Gln	Leu	Tyr	Ile
	130					135					140				
Ser	Leu	Ala	Leu	Gly	Ser	Thr	Glu	Cys	Ile	Leu	Leu	Ala	Asp	Met	Ala
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Leu	Asp	Arg	Tyr	Ile	Ala	Val	Cys	Lys	Pro	Leu	His	Tyr	Val	Val	Ile
				165					170					175	
Met	Asn	Pro	Arg	Leu	Cys	Gln	Gln	Leu	Ala	Ser	Ile	Ser	Trp	Leu	Ser
			180					185					190		
Gly	Leu	Ala	Ser	Ser	Leu	Ile	His	Ala	Thr	Phe	Thr	Leu	Gln	Leu	Pro
		195					200					205			
Leu	Cys	Gly	Asn	His	Arg	Leu	Asp	His	Phe	Ile	Cys	Glu	Val	Pro	Ala
	210					215					220				
Leu	Leu	Lys	Leu	Ala	Cys	Val	Asp	Thr	Thr	Val	Asn	Glu	Leu	Val	Leu
225					230					235					240
Phe	Val	Val	Ser	Val	Leu	Phe	Val	Val	Ile	Pro	Pro	Ala	Leu	Ile	Ser
				245					250					255	
Ile	Ser	Tyr	Gly	Phe	Ile	Thr	Gln	Ala	Val	Leu	Arg	Ile	Lys	Ser	Val
			260					265					270		
Glu	Ala	Arg	His	Lys	Ala	Phe	Ser	Thr	Cys	Ser	Ser	His	Leu	Thr	Val
		275					280					285			

Val Ile Ile Phe Tyr Gly Thr Ile Ile Tyr Val Tyr Leu Gln Pro Ser
290 295 300

Asp Ser Tyr Ala Gln Asp Gln Gly Lys Phe Ile Ser Leu Phe Tyr Thr
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Met Val Thr Pro Thr Leu Asn Pro Ile Ile Tyr Thr Leu Arg Asn Lys
325 330 335

Asp Met Lys Glu Ala Leu Arg Lys Leu Leu Ser Gly Lys Leu
340 345 350

<210> 398
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 398
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gggatgggat tgggcaatga gagttcccta atggatttca tccttctagg cttctcagac 180
caccctcgtc tggaggctgt tctctttgta tttgtccttt tcttctacct cctgaccctt 240
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<210> 399
<211> 323
<212> PRT
<213> Homo sapiens

<400> 399
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Val Leu Tyr Thr Val Ile Val Leu Gly Asn Leu Leu Ile Ile Leu Thr
35 40 45
Val Thr Ser Asp Thr Ser Leu His Ser Pro Met Tyr Phe Leu Leu Gly
50 55 60
Asn Leu Ser Phe Val Asp Ile Cys Gln Ala Ser Phe Ala Thr Pro Lys
65 70 75 80

Met Ile Ala Asp Phe Leu Ser Ala His Glu Thr Ile Ser Phe Ser Gly
 85 90 95
 Cys Ile Ala Gln Ile Phe Phe Ile His Leu Phe Thr Gly Gly Glu Met
 100 105 110
 Val Leu Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125
 Pro Leu Tyr Tyr Val Val Ile Met Ser Arg Arg Thr Cys Thr Val Leu
 130 135 140
 Val Met Ile Ser Trp Ala Val Ser Leu Val His Thr Leu Ser Gln Leu
 145 150 155 160
 Ser Phe Thr Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser
 165 170 175
 Phe Phe Cys Asp Leu Pro Arg Val Thr Lys Leu Ala Cys Leu Asp Ser
 180 185 190
 Tyr Ile Ile Glu Ile Leu Ile Val Val Asn Ser Gly Ile Leu Ser Leu
 195 200 205
 Ser Thr Phe Ser Leu Leu Val Ser Ser Tyr Ile Ile Ile Leu Val Thr
 210 215 220
 Val Trp Leu Lys Ser Ser Ala Ala Met Ala Lys Ala Phe Ser Thr Leu
 225 230 235 240
 Ala Ser His Ile Ala Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255
 Ile Tyr Val Trp Pro Phe Thr Ile Ser Pro Leu Asp Lys Phe Leu Ala
 260 265 270
 Ile Phe Tyr Thr Val Phe Thr Pro Val Leu Asn Pro Ile Ile Tyr Thr
 275 280 285
 Leu Arg Asn Arg Asp Met Lys Ala Ala Val Arg Lys Ile Val Asn His
 290 295 300
 Tyr Leu Arg Pro Arg Arg Ile Ser Glu Met Ser Leu Val Val Arg Thr
 305 310 315 320
 Ser Phe His

<210> 400
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 400
 atggataagt ccaattcttc agtgggtgtct gaatttgtac tgttgggact ctgtagttct 60
 caaaaactcc agcttttcta tttttgtttc ttctctgtgt tgtatacagt cattgtgctg 120
 ggaaatcttc tcattatcct cacagtgact tctgatacca gcctgcactc ccctatgtac 180
 tttctcttgg gaaacctttc ctttgttgac atttgtcagg cttcttttgc taccctaaa 240
 atgattgcag attttctgag tgcacacgag accatatctt tcagtggctg catagcccaa 300
 attttcttta ttcacctttt tactggaggg gagatggtgc tacttgtttc gatggcctat 360

gacaggtatg tagccatag caaacctta tactatgtgg tcatcatgag ccgaaggaca 420
tgcactgtct tggtaatgat ctctctgggct gtgagcttgg tgcacacatt aagccagtta 480
tcattttactg tgaacctgcc tttttgtgga cctaattgtag tagacagctt tttttgtgat 540
cttcctcgag tcaccaaact tgcctgcctg gactcttaca tcattgaaat actaattgtg 600
gtcaatagtg gaattctttc cctaagcact ttctctctct tggtcagctc ctacatcatt 660
attcttgtta cagtttggct caagtcttca gctgcaatgg caaaggcatt ttctacgctg 720
gcttcccata ttgcagtagt aatattattc tttggacctt gcattcttcat ctatgtgtgg 780
ccctttacca tctctccttt ggataaattt cttgccatat tttacactgt tttaccccc 840
gtcctaaacc ccattattta tacactaagg aatagggata tgaaggctgc cgtaaggaaa 900
attgtgaacc attacctgag gccaaaggaga atttctgaaa tgtcactagt agtgagaact 960
tcctttcatt aa 972

<210> 401
<211> 311
<212> PRT
<213> Homo sapiens

<400> 401
Met Ala His Thr Asn Glu Ser Met Val Ser Glu Phe Val Leu Leu Gly
1 5 10 15
Leu Ser Asn Ser Trp Gly Leu Gln Leu Phe Phe Phe Ala Ile Phe Ser
20 25 30
Ile Val Tyr Val Thr Ser Val Leu Gly Asn Val Leu Ile Ile Val Ile
35 40 45
Ile Ser Phe Asp Ser His Leu Asn Ser Pro Met Tyr Phe Leu Leu Ser
50 55 60
Asn Leu Ser Phe Ile Asp Ile Cys Gln Ser Asn Phe Ala Thr Pro Lys
65 70 75 80
Met Leu Val Asp Phe Phe Ile Glu Arg Lys Thr Ile Ser Phe Glu Gly
85 90 95
Cys Met Ala Gln Ile Phe Val Leu His Ser Phe Val Gly Ser Glu Met
100 105 110
Met Leu Leu Val Ala Met Ala Tyr Asp Arg Phe Ile Ala Ile Cys Lys
115 120 125
Pro Leu His Tyr Ser Thr Ile Met Asn Arg Arg Leu Cys Val Ile Phe
130 135 140
Val Ser Ile Ser Trp Ala Val Gly Val Leu His Ser Val Ser His Leu
145 150 155 160
Ala Phe Thr Val Asp Leu Pro Phe Cys Gly Pro Asn Glu Val Asp Ser
165 170 175
Phe Phe Cys Asp Leu Pro Leu Val Ile Glu Leu Ala Cys Met Asp Thr
180 185 190
Tyr Glu Met Glu Ile Met Thr Leu Thr Asn Ser Gly Leu Ile Ser Leu
195 200 205
Ser Cys Phe Leu Ala Leu Ile Ile Ser Tyr Thr Ile Ile Leu Ile Gly
210 215 220

Val Arg Cys Arg Ser Ser Ser Gly Ser Ser Lys Ala Leu Ser Thr Leu
 225 230 235 240
 Thr Ala His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Cys Ile Tyr
 245 250 255
 Phe Tyr Ile Trp Pro Phe Ser Arg Leu Pro Val Asp Lys Phe Leu Ser
 260 265 270
 Val Phe Tyr Thr Val Cys Thr Pro Leu Leu Asn Pro Ile Ile Tyr Ser
 275 280 285
 Leu Arg Asn Glu Asp Val Lys Ala Ala Met Trp Lys Leu Arg Asn His
 290 295 300
 His Val Asn Ser Trp Lys Asn
 305 310

<210> 402
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 402
 atggctcaca caaatgaatc gatggtgtct gagtttgtac ttttgggact ctctaattcc 60
 tggggacttc aacttttctt tttcgccatc ttctctatag tctatgtgac atcagtgcta 120
 ggcaatgtct taattattgt cattatttct tttgactccc atttgaactc tcctatgtac 180
 ttcttgctca gtaatctttc tttcattgat atctgtcagt ctaactttgc caccaccaag 240
 atgcttgtag acttttttat tgagcgcaag actatctcct ttgaggggtg catggcccag 300
 atattcgttc ttcacagttt tgttgggagt gagatgatgt tgcttgtagc tatggcatat 360
 gacagattta tagccatatg taagcctctg cactacagta caattatgaa ccggaggctc 420
 tgtgtaattt ttgtgtctat ttcttgggag gtgggcgttc ttcattctgt gagccacttg 480
 gcttttacag tggacctgcc attctgtggt cccaatgagg tggatagctt cttttgtgac 540
 cttcccttgg tgatagagct ggcttgcatt gatacatatg aaatggaaat tatgacccta 600
 acgaacagtg gcctgatatc attgagctgt ttcttggctt taattatttc ctacaccatc 660
 attttgatcg gtgtccgatg caggtcctcc agtggggtcat ctaagggtct ttctacatta 720
 actgcccaca tcacagtggg cattcttttc ttcgggcctt gcatttattt ctatatatgg 780
 ccttttagca gacttctctg ggacaaaatt ctttctgtgt tctacactgt ttgtactccc 840
 ttgttgaacc ccatcatcta ctctttgagg aatgaagatg ttaaagcagc catgtggaag 900
 ctgagaaacc atcatgtgaa ctcttggaag aactag 936

<210> 403
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Asp Val Gly Asn Lys Ser Thr Met Ser Glu Phe Val Leu Leu Gly
 1 5 10 15
 Leu Ser Asn Ser Trp Glu Leu Gln Met Phe Phe Phe Met Val Phe Ser
 20 25 30
 Leu Leu Tyr Val Ala Thr Met Val Gly Asn Ser Leu Ile Val Ile Thr
 35 40 45
 Val Ile Val Asp Pro His Leu His Ser Pro Met Tyr Phe Leu Leu Thr
 50 55 60

Asn Leu Ser Ile Ile Asp Met Ser Leu Ala Ser Phe Ala Thr Pro Lys
 65 70 75 80
 Met Ile Thr Asp Tyr Leu Thr Gly His Lys Thr Ile Ser Phe Asp Gly
 85 90 95
 Cys Leu Thr Gln Ile Phe Phe Leu His Leu Phe Thr Gly Thr Glu Ile
 100 105 110
 Ile Leu Leu Met Ala Met Ser Phe Asp Arg Tyr Ile Ala Ile Cys Lys
 115 120 125
 Pro Leu His Tyr Ala Ser Val Ile Ser Pro Gln Val Cys Val Ala Leu
 130 135 140
 Val Val Ala Ser Trp Ile Met Gly Val Met His Ser Met Ser Gln Val
 145 150 155 160
 Ile Phe Ala Leu Thr Leu Pro Phe Cys Gly Pro Tyr Glu Val Asp Ser
 165 170 175
 Phe Phe Cys Asp Leu Pro Val Val Phe Gln Leu Ala Cys Val Asp Thr
 180 185 190
 Tyr Val Leu Gly Leu Phe Met Ile Ser Thr Ser Gly Ile Ile Ala Leu
 195 200 205
 Ser Cys Phe Ile Val Leu Phe Asn Ser Tyr Val Ile Val Leu Val Thr
 210 215 220
 Val Lys His His Ser Ser Arg Gly Ser Ser Lys Ala Leu Ser Thr Cys
 225 230 235 240
 Thr Ala His Phe Ile Val Val Phe Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255
 Ile Tyr Met Trp Pro Leu Ser Ser Phe Leu Thr Asp Lys Ile Leu Ser
 260 265 270
 Val Phe Tyr Thr Ile Phe Thr Pro Thr Leu Asn Pro Ile Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Glu Val Lys Ile Ala Met Arg Lys Leu Lys Asn Arg
 290 295 300
 Phe Leu Asn Phe Asn Lys Ala Met Pro Ser
 305 310

<210> 404
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 404
 atggatgtgg gcaataagtc taccatgtct gaatttggtt tgctggggct ctctaattcc 60
 tgggaactac agatgttttt ctttatggtg ttttcattgc tttatgtggc aacaatgggtg 120
 ggtaacagcc tcatagtcac cacagttata gtggaccctc acctacactc tcctatgtat 180
 ttcctgctta ccaatctttc aatcattgat atgtctcttg cttctttcgc caccctaaag 240
 atgattacag attacctaac aggtcacaaa accatctctt ttgatggctg ccttaccag 300
 atattctttc tccacctttt cactggaact gagatcatct tactcatggc catgtccttt 360

```

gataggtata ttgcaatatg caagcccctg cactatgctt ctgtcattag tccccaggtg 420
tgtgttgctc tcgtggtggc ttcctggatt atgggagtta tgcattcaat gagtcaggtc 480
atatttgccc tcacgttacc attctgtggt ccctatgagg tagacagctt tttctgtgac 540
cttcctgtgg tggtccagtt ggcttgtgtg gatacttatg ttctgggcct ctttatgac 600
tcaacaagtg gcataattgc gttgtcctgt tttattgttt tatttaattc atatgttatt 660
gtcctgggta ctgtgaagca tcattcttcc agaggatcat ctaaggccct ttctacttgt 720
acagctcatt tcattgttgt cttcttggtc tttgggccat gcattctcat ctacatgtgg 780
ccactaagca gctttctcac agacaagatt ctgtctgtgt tttataccat ctttactccc 840
actctgaacc caataatcta tactttgagg aatcaagaag taaagatagc catgaggaaa 900
ctgaaaaata ggtttctaaa ttttaataag gcaatgcctt catag 945

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<210> 405

<211> 325

<212> PRT

<213> Homo sapiens

<400> 405

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Met Leu Glu Ser Phe Gln Lys Ser Glu Gln Met Ala Trp Ser Asn Gln
  1                      5                      10                      15

```

```

Ser Ala Val Thr Glu Phe Ile Leu Arg Gly Leu Ser Ser Ser Leu Glu
          20                      25                      30

```

```

Leu Gln Ile Phe Tyr Phe Leu Phe Phe Ser Ile Val Tyr Ala Ala Thr
      35                      40                      45

```

```

Val Leu Gly Asn Leu Leu Ile Val Val Thr Ile Ala Ser Glu Pro His
      50                      55                      60

```

```

Leu His Ser Pro Thr Tyr Phe Leu Leu Gly Asn Leu Ser Phe Ile Asp
      65                      70                      75                      80

```

```

Met Ser Leu Ala Ser Phe Ala Thr Pro Lys Met Ile Ala Asp Phe Leu
          85                      90                      95

```

```

Arg Glu His Lys Ala Ile Ser Phe Glu Gly Cys Met Thr Gln Met Phe
      100                      105                      110

```

```

Phe Leu His Leu Leu Gly Gly Ala Glu Ile Val Leu Leu Ile Ser Met
      115                      120                      125

```

```

Ser Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr Leu Thr
      130                      135                      140

```

```

Ile Met Ser Arg Arg Met Cys Val Gly Leu Val Ile Leu Ser Trp Ile
      145                      150                      155                      160

```

```

Val Gly Ile Phe His Ala Leu Ser Gln Leu Ala Phe Thr Val Asn Leu
          165                      170                      175

```

```

Pro Phe Cys Gly Pro Asn Glu Val Asp Ser Phe Phe Cys Asp Leu Pro
          180                      185                      190

```

```

Leu Val Ile Lys Leu Ala Cys Val Asp Thr Tyr Ile Leu Gly Val Phe
      195                      200                      205

```

```

Met Ile Ser Thr Ser Gly Met Ile Ala Leu Val Cys Phe Ile Leu Leu
      210                      215                      220

```

```

Val Ile Ser Tyr Thr Ile Ile Leu Val Thr Val Arg Gln Arg Ser Ser

```

225 230 235 240
 Gly Gly Ser Ser Lys Ala Leu Ser Thr Cys Ser Ala His Phe Thr Val
 245 250 255
 Val Thr Leu Phe Phe Gly Pro Cys Thr Phe Ile Tyr Val Trp Pro Phe
 260 265 270
 Thr Asn Phe Pro Ile Asp Lys Val Leu Ser Val Phe Tyr Thr Ile Tyr
 275 280 285
 Thr Pro Leu Leu Asn Pro Val Ile Tyr Thr Val Arg Asn Lys Asp Val
 290 295 300
 Lys Tyr Ser Met Arg Lys Leu Ser Ser His Ile Phe Lys Ser Arg Lys
 305 310 315 320
 Thr Asp His Thr Pro
 325

<210> 406
 <211> 978
 <212> DNA
 <213> Homo sapiens

<400> 406
 atgctagagt ccttccagaa atcagagcaa atggcctgga gcaatcagtc tgcggttaacc 60
 gaattcatac tacggggtct gtccagttct ttagaactcc agattttcta cttcctggtt 120
 ttctccatag tctatgcagc cactgtgctg gggaaccttc ttattgtggt caccattgca 180
 tcagagccac accttcattc ccctacgtac tttctgctgg gcaatctctc cttcattgac 240
 atgtccctgg cctcatttgc caccaccaaa atgattgcag acttccttag agaacacaaa 300
 gccatctctt ttgaaggctg catgaccag atgttcttcc tacatctctt agggggtgct 360
 gagattgtac tgctgatctc catgtccttt gataggtaag tggctatctg taagcctcta 420
 cattacctaa caatcatgag ccgaagaatg tgtgttgggc ttgtgatact ttcctggatt 480
 gtcggcatct tccatgctct gagtcagtta gcatttacag tgaatctgcc cttctgtgga 540
 cccaatgaag tagacagttt cttttgtgac ctcccttttg tgattaaact tgcttgtgtc 600
 gacacatata ttctgggggt gttcatgate tcaaccagtg gcatgattgc cctgggtgtgc 660
 ttcatcctct tgggtgatctc ttacactatc atcctgggtca ccgttcggca gcgttctctc 720
 ggtggatcct ccaaagccct ctccacgtgc agtgcccact ttactgttgt gacccttttc 780
 tttggcccat gcactttcat ttatgtgtgg cctttcacaa atttcccaat agacaaagta 840
 ctctcagtat tttataccat atacactccc ctcttgaatc cagtgatcta taccgttagg 900
 aataaagatg tcaagtattc catgaggaaa ctaagcagcc atatctttaa atctaggaag 960
 actgatcata ctctttaa 978

<210> 407
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 407
 Met Glu Thr Ala Asn Tyr Thr Lys Val Thr Glu Phe Val Leu Thr Gly
 1 5 10 15
 Leu Ser Gln Thr Arg Glu Val Gln Leu Val Leu Phe Val Ile Phe Leu
 20 25 30
 Ser Phe Tyr Leu Phe Ile Leu Pro Gly Asn Ile Leu Ile Ile Cys Thr
 35 40 45

Ile Arg Leu Asp Pro His Leu Thr Ser Pro Met Tyr Phe Leu Leu Ala
 50 55 60
 Asn Leu Ala Leu Leu Asp Ile Trp Tyr Ser Ser Ile Thr Ala Pro Lys
 65 70 75 80
 Met Leu Ile Asp Phe Phe Val Glu Arg Lys Ile Ile Ser Phe Gly Gly
 85 90 95
 Cys Ile Ala Gln Leu Phe Phe Leu His Phe Val Gly Ala Ser Glu Met
 100 105 110
 Phe Leu Leu Ile Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Ala Thr Ile Met Asn Arg Arg Leu Cys Cys Ile Leu
 130 135 140
 Val Ala Leu Ser Trp Met Gly Gly Phe Ile His Ser Ile Ile Gln Val
 145 150 155 160
 Ala Leu Ile Val Arg Leu Pro Phe Cys Gly Pro Asn Glu Leu Asp Ser
 165 170 175
 Tyr Phe Cys Asp Ile Thr Gln Val Val Arg Ile Ala Cys Ala Asn Thr
 180 185 190
 Phe Pro Glu Glu Leu Val Met Ile Cys Ser Ser Gly Leu Ile Ser Val
 195 200 205
 Val Cys Phe Ile Ala Leu Leu Met Ser Tyr Ala Phe Leu Leu Ala Leu
 210 215 220
 Leu Lys Lys His Ser Gly Ser Asp Glu Asn Thr Asn Arg Ala Met Ser
 225 230 235 240
 Thr Cys Tyr Ser His Ile Thr Ile Val Val Leu Met Phe Gly Pro Ser
 245 250 255
 Ile Tyr Ile Tyr Ala Arg Pro Phe Asp Ser Phe Ser Leu Asp Lys Val
 260 265 270
 Val Ser Val Phe His Thr Val Ile Phe Pro Leu Leu Asn Pro Ile Ile
 275 280 285
 Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala Ala Met Arg Lys Val Val
 290 295 300
 Thr Lys Tyr Ile Leu Cys Glu Glu Lys
 305 310

<210> 408

<211> 942

<212> DNA

<213> Homo sapiens

<400> 408

atggaaactg caaattacac caaggtgaca gaatttggtc tcaactggcct atcccagact 60
 cgggaggtcc aactagtcct atttggtata tttctatcct tctatttggt catcctacca 120
 ggaaatatcc ttatcatttg caccatcagg ctagaccctc atctgacttc tcctatgtat 180

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ttcctgttgg ctaatctggc ctccttgat atttggtact cttccattac agcccctaaa 240
atgctcatag acttctttgt ggagaggaag ataatttcct ttggtggatg cattgcacag 300
ctcttcttct tacactttgt tggggcttcg gagatgttct tgctcatagt gatggcctat 360
gaccgctatg ctgctatctg ccgacccctc cactatgcta ccatcatgaa tcgacgtctc 420
tgctgtatcc tgggtggctct ctcctggatg gggggcttca ttcattctat aatacagggtg 480
gctctcattg ttcgacttcc tttctgtggg cccaatgagt tagacagtta cttctgtgac 540
atcacacagg ttgtccggat tgccgtgccc aacaccttcc cagaggagtt agtgatgac 600
tgtagtagtg gtctgatctc tgtggtgtgt ttcattgctc tgtaaatgtc ctatgccttc 660
cttctggcct tgctcaagaa acattcaggc tcagatgaga ataccaacag ggccatgtcc 720
acctgctatt cccacattac cattgtggtg ctaatgtttg ggccatccat ctacatttat 780
gctcgcccat ttgactcatt ttccctagat aaagtgggtg ctgtgtttca tactgtaata 840
ttccctttac ttaatcccat tattttacaca ttgagaaaca aggaagtaaa ggcagccatg 900
aggaaggtgg tcaccaaata tattttgtgt gaagagaagt ga 942

```

<210> 409

<211> 348

<212> PRT

<213> Homo sapiens

<400> 409

```

Met Leu Thr Ser Leu Thr Asp Leu Cys Phe Ser Pro Ile Gln Val Ala
 1             5             10             15

Glu Ile Lys Ser Leu Pro Lys Ser Met Asn Glu Thr Asn His Ser Arg
      20             25             30

Val Thr Glu Phe Val Leu Leu Gly Leu Ser Ser Ser Arg Glu Leu Gln
      35             40             45

Pro Phe Leu Phe Leu Thr Phe Ser Leu Leu Tyr Leu Ala Ile Leu Leu
      50             55             60

Gly Asn Phe Leu Ile Ile Leu Thr Val Thr Ser Asp Ser Arg Leu His
      65             70             75             80

Thr Pro Met Tyr Phe Leu Leu Ala Asn Leu Ser Phe Ile Asp Val Cys
      85             90             95

Val Ala Ser Phe Ala Thr Pro Lys Met Ile Ala Asp Phe Leu Val Glu
      100            105            110

Arg Lys Thr Ile Ser Phe Asp Ala Cys Leu Ala Gln Ile Phe Phe Val
      115            120            125

His Leu Phe Thr Gly Ser Glu Met Val Leu Leu Val Ser Met Ala Tyr
      130            135            140

Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr Met Thr Val Met
      145            150            155            160

Ser Arg Arg Val Cys Val Val Leu Val Leu Ile Ser Trp Phe Val Gly
      165            170            175

Phe Ile His Thr Thr Ser Gln Leu Ala Phe Thr Val Asn Leu Pro Phe
      180            185            190

Cys Gly Pro Asn Lys Val Asp Ser Phe Phe Cys Asp Leu Pro Leu Val
      195            200            205

Thr Lys Leu Ala Cys Ile Asp Thr Tyr Val Val Ser Leu Leu Ile Val

```


210	215	220
Ala Asp Ser Gly Phe Leu Ser Leu Ser Ser Phe Leu Leu Leu Val Val		
225	230	235 240
Ser Tyr Thr Val Ile Leu Val Thr Val Arg Asn Arg Ser Ser Ala Ser		
	245	250 255
Met Ala Lys Ala Arg Ser Thr Leu Thr Ala His Ile Thr Val Val Thr		
	260	265 270
Leu Phe Phe Gly Pro Cys Ile Phe Ile Tyr Val Trp Pro Phe Ser Ser		
	275	280 285
Tyr Ser Val Asp Lys Val Leu Ala Val Phe Tyr Thr Ile Phe Thr Leu		
	290	295 300
Ile Leu Asn Pro Val Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala		
305	310	315 320
Ala Met Ser Lys Leu Lys Ser Arg Tyr Leu Lys Pro Ser Gln Val Ser		
	325	330 335
Val Val Ile Arg Asn Val Leu Phe Leu Glu Thr Lys		
	340	345

<210> 410
 <211> 1047
 <212> DNA
 <213> Homo sapiens

<400> 410
 atgctcactt cattaactga tctctgtttc tctcctattc aggtagctga aattaagtcc 60
 cttccaaaat cgatgaatga gacaaatcat tctcgggtga cagaatttgt gttgctggga 120
 ctgtctagtt caaggagct ccaacctttc ttgtttctta cattttcact actttatcta 180
 gcaattctgt tgggcaactt tctcatcatc ctcactgtga cctcagattc ccgccttcac 240
 acccccatgt actttctgct tgcaaacctg tcatattatag acgtatgtgt tgcctctttt 300
 gctaccctta aaatgattgc agactttctg gttgagcgca agactatttc ttttgatgcc 360
 tgccctggccc agattttctt tgttcatctc ttcactggca gtgaaatggg gtcctagtt 420
 tccatggcct atgaccgtta tgttgctata tgcaaaccctc tccactacat gacagtcacg 480
 agccgtcgtg tatgtgttgt gctcgtctctc atttcatggg ttgtgggctt catccatact 540
 accagccagt tggcattcac tgtaaatctg ccattttgtg gtcctaataa ggtagacagt 600
 tttttctgtg accttctctc agtgaccaag ttagcctgca tagacactta tgttgtcagc 660
 ttactaatag ttgcagatag tggttttctt tctctgagtt cctttctcct cttggttgtc 720
 tctacactg taatacttgt tacagttagg aatcgctcct ctgcaagcat ggcgaaggcc 780
 cgctccacat tgactgctca catcactgtg gtcactttat tctttggacc atgcattttc 840
 atctatgtgt ggcccttcag cagttactca gttgacaaag tccttgctgt attctacacc 900
 atcttcacgc ttattttaaa ccctgtaac tacacgctaa gaaacaaaga agtgaaggca 960
 gctatgtcaa aactgaagag tcggtatctg aagcctagtc aggtttctgt agtcataaga 1020
 aatgttcttt tctagaaac aaagtaa 1047

<210> 411
 <211> 343
 <212> PRT
 <213> Homo sapiens

<400> 411
 Met Lys Gln Tyr Ser Val Gly Asn Gln His Ser Asn Tyr Arg Ser Leu
 1 5 10 15

Leu	Phe	Pro	Phe	Leu	Cys	Ser	Gln	Met	Thr	Gln	Leu	Thr	Ala	Ser	Gly	20	25	30
Asn	Gln	Thr	Met	Val	Thr	Glu	Phe	Leu	Phe	Ser	Met	Phe	Pro	His	Ala	35	40	45
His	Arg	Gly	Gly	Leu	Leu	Phe	Phe	Ile	Pro	Leu	Leu	Leu	Ile	Tyr	Gly	50	55	60
Phe	Ile	Leu	Thr	Gly	Asn	Leu	Ile	Met	Phe	Ile	Val	Ile	Gln	Val	Gly	65	70	75
Met	Ala	Leu	His	Thr	Pro	Leu	Tyr	Phe	Phe	Ile	Ser	Val	Leu	Ser	Phe	85	90	95
Leu	Glu	Ile	Cys	Tyr	Thr	Thr	Thr	Thr	Ile	Pro	Lys	Met	Leu	Ser	Cys	100	105	110
Leu	Ile	Ser	Glu	Gln	Lys	Ser	Ile	Ser	Val	Ala	Gly	Cys	Leu	Leu	Gln	115	120	125
Met	Tyr	Phe	Phe	His	Ser	Leu	Gly	Ile	Thr	Glu	Ser	Cys	Val	Leu	Thr	130	135	140
Ala	Met	Ala	Ile	Asp	Arg	Tyr	Ile	Ala	Ile	Cys	Asn	Pro	Leu	Arg	Tyr	145	150	155
Pro	Thr	Ile	Met	Ile	Pro	Lys	Leu	Cys	Ile	Gln	Leu	Thr	Val	Gly	Ser	165	170	175
Cys	Phe	Cys	Gly	Phe	Leu	Leu	Val	Leu	Pro	Glu	Ile	Ala	Trp	Ile	Ser	180	185	190
Thr	Leu	Pro	Phe	Cys	Gly	Ser	Asn	Gln	Ile	His	Gln	Ile	Phe	Cys	Asp	195	200	205
Phe	Thr	Pro	Val	Leu	Ser	Leu	Ala	Cys	Thr	Asp	Thr	Phe	Leu	Val	Val	210	215	220
Ile	Val	Asp	Ala	Ile	His	Ala	Ala	Glu	Ile	Val	Ala	Ser	Phe	Leu	Val	225	230	235
Ile	Ala	Leu	Ser	Tyr	Ile	Arg	Ile	Ile	Ile	Val	Ile	Leu	Gly	Met	His	245	250	255
Ser	Ala	Glu	Gly	His	His	Lys	Ala	Phe	Ser	Thr	Cys	Ala	Ala	His	Leu	260	265	270
Ala	Val	Phe	Leu	Leu	Phe	Phe	Gly	Ser	Val	Ala	Val	Met	Tyr	Leu	Arg	275	280	285
Phe	Ser	Ala	Thr	Tyr	Ser	Val	Phe	Trp	Asp	Thr	Ala	Ile	Ala	Val	Thr	290	295	300
Phe	Val	Ile	Leu	Ala	Pro	Phe	Phe	Asn	Pro	Ile	Ile	Tyr	Ser	Leu	Lys	305	310	315
Asn	Lys	Asp	Met	Lys	Glu	Ala	Ile	Gly	Arg	Leu	Phe	His	Tyr	Gln	Lys	325	330	335

Arg Ala Gly Trp Ala Gly Lys
340

<210> 412
<211> 1032
<212> DNA
<213> Homo sapiens

<400> 412
atgaagcaat attcagtgagg taatcaacat tccaattata ggagtctctt gtttcctttt 60
ctgtgttcac agatgacaca gttgacggcc agtgggaatc agacaatggg gactgagttc 120
ctcttctcta tggtcccgca tgcgcacaga ggtggcctct tattctttat tcccttgctt 180
ctcatctacg gatttatcct aactggaaac ctaataatgt tcattgtcat ccagggtggg 240
atggccctgc acacccttt gtatttcttt atcagtggtc tctccttcct ggagatctgc 300
tataccacaa ccaccatccc caagatgctg tctgcctaa tcagtgcagc gaagagcatt 360
tccgtggctg gctgcctcct gcagatgtac tttttccact cacttggtat cacagaaagc 420
tgtgtcctga cagcaatggc cattgacagg tacatagcta tctgcaatcc actccgttac 480
ccaaccatca tgattcccaa actttgtatc cagctgacag ttggatcctg cttttgtggc 540
ttcctccttg tgcttcctga gattgcatgg atttccacct tgcctttctg tggctccaac 600
cagatccacc agatattctg tgatttcaca cctgtgctga gcttggcctg cacagataca 660
ttcctagtgg tcattgtgga tgccatccat gcagcggaaa ttgtagcctc cttcctgggc 720
attgctctat cctacatccg gattattata gtgattctgg gaatgcactc agctgaagg 780
catcacaagg ccttttccac ctgtgctgct caocttgctg tgttcttgct attttttggc 840
agtgtggctg tcatgtattt gagattctca gccacctact cagtgttttg ggacacagca 900
attgctgtca cttttgttat ccttgctccc tttttcaacc ccatcatcta tagcctgaaa 960
aacaaggaca tgaaagaggc tattggaagg cttttccact atcagaagag ggctggttg 1020
gctgggaaat ag 1032

<210> 413
<211> 317
<212> PRT
<213> Homo sapiens

<400> 413
Met Arg Asn Leu Ser Gly Gly His Val Glu Glu Phe Val Leu Val Gly
1 5 10 15
Phe Pro Thr Thr Pro Pro Leu Gln Leu Leu Leu Phe Val Leu Phe Phe
20 25 30
Ala Ile Tyr Leu Leu Thr Leu Leu Glu Asn Ala Leu Ile Val Phe Thr
35 40 45
Ile Trp Leu Ala Pro Ser Leu His Arg Pro Met Tyr Phe Phe Leu Gly
50 55 60
His Leu Ser Phe Leu Glu Leu Trp Tyr Ile Asn Val Thr Ile Pro Arg
65 70 75 80
Leu Leu Ala Ala Phe Leu Thr Gln Asp Gly Arg Val Ser Tyr Val Gly
85 90 95
Cys Met Thr Gln Leu Tyr Phe Phe Ile Ala Leu Ala Cys Thr Glu Cys
100 105 110
Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gly
115 120 125
Pro Leu Leu Tyr Pro Ser Leu Met Pro Ser Ser Leu Ala Thr Arg Leu

130	135	140
Ala Ala Ala Ser Trp Gly Ser Gly Phe Phe Ser Ser Met Met Lys Leu		
145	150	155 160
Leu Phe Ile Ser Gln Leu Ser Tyr Cys Gly Pro Asn Ile Ile Asn His		
	165	170 175
Phe Phe Cys Asp Ile Ser Pro Leu Leu Asn Leu Thr Cys Ser Asp Lys		
	180	185 190
Glu Gln Ala Glu Leu Val Asp Phe Leu Leu Ala Leu Val Met Ile Leu		
	195	200 205
Leu Pro Leu Leu Ala Val Val Ser Ser Tyr Thr Ala Ile Ile Ala Ala		
	210	215 220
Ile Leu Arg Ile Pro Thr Ser Arg Gly Arg His Lys Ala Phe Ser Thr		
225	230	235 240
Cys Ala Ala His Leu Ala Val Val Val Ile Tyr Tyr Ser Ser Thr Leu		
	245	250 255
Phe Thr Tyr Ala Arg Pro Arg Ala Met Tyr Thr Phe Asn His Asn Lys		
	260	265 270
Ile Ile Ser Val Leu Tyr Thr Ile Ile Val Pro Phe Phe Asn Pro Ala		
	275	280 285
Ile Tyr Cys Leu Arg Asn Lys Glu Val Lys Glu Ala Phe Arg Lys Thr		
	290	295 300
Val Met Gly Arg Cys His Tyr Pro Arg Asp Val Gln Asp		
305	310	315

<210> 414
 <211> 954
 <212> DNA
 <213> Homo sapiens

<400> 414
 atgagaaatt tgagtggagg ccatgtcgag gagtttgtct tgggtgggttt ccctaccacg 60
 cctcccctcc agctgtcctt ctttgtcctt ttttttgcaa ttaccttct gacattgttg 120
 gagaatgcac ttattgtctt cacaatatgg cttgctccaa gccttcatcg tcccatgtac 180
 tttttccttg gccatctctt tttcctggag ctatggtaca tcaatgtcac cattcctcgg 240
 ctcttggcag cttttcttac ccaggatggg agagtctcct acgtagggtg catgacccaa 300
 ctgtacttct ttattgcctt agcctgtact gaatgtgtgc tgttggcagt tatggcctat 360
 gatcgctacc tggccatctg tggacccctc ctttacccta gtctcatgcc ttccagtctg 420
 gccactcgcc ttgctgctgc ctcttggggc agtggcttct tcagctccat gatgaagctt 480
 ctttttattt cccaattgtc ctactgtgga cccaacatta tcaaccactt tttctgtgat 540
 atttccccac tactcaacct cacctgctct gacaaggagc aagcagagct agtagacttc 600
 cttctggccc tgggtgatgat tctactcctt ctattggctg tggtttcac atactactgc 660
 atcattgcag ccaccttgag gatccctacg tccaggggac gccacaaagc cttttccact 720
 tgtgccgctc atctggcagt gggtgttatc tactactcct ccactctctt cacctatgca 780
 cggccccggg ccatgtacac cttcaaccac aacaagatta tctctgtgct ctacactatc 840
 attgtaccat tcttcaacct agccatctac tgcctgagga acaaggaggt gaaggaggcc 900
 ttcaggaaga cagtgatggg cagatgtcac tatcctaggg atgttcagga ctga 954

<210> 415

<211> 313
<212> PRT
<213> Homo sapiens

<400> 415

Met	Gly	Gln	Thr	Asn	Val	Thr	Ser	Trp	Arg	Asp	Phe	Val	Phe	Leu	Gly		
1				5					10					15			
Phe	Ser	Ser	Ser	Gly	Glu	Leu	Gln	Leu	Leu	Leu	Phe	Ala	Leu	Phe	Leu		
			20					25					30				
Ser	Leu	Tyr	Leu	Val	Thr	Leu	Thr	Ser	Asn	Val	Phe	Ile	Ile	Ile	Ala		
		35					40					45					
Ile	Arg	Leu	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Leu	Phe	Leu	Ser		
	50					55					60						
Phe	Leu	Ser	Phe	Ser	Glu	Thr	Cys	Tyr	Thr	Leu	Gly	Ile	Ile	Pro	Arg		
65					70					75					80		
Met	Leu	Ser	Gly	Leu	Ala	Gly	Gly	Asp	Gln	Ala	Ile	Ser	Tyr	Val	Gly		
				85					90						95		
Cys	Ala	Ala	Gln	Met	Phe	Phe	Ser	Ala	Ser	Trp	Ala	Cys	Thr	Asn	Cys		
			100					105					110				
Phe	Leu	Leu	Ala	Ala	Met	Gly	Phe	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Ala		
			115				120						125				
Pro	Leu	His	Tyr	Ala	Ser	His	Met	Asn	Pro	Thr	Leu	Cys	Ala	Gln	Leu		
	130					135					140						
Val	Ile	Thr	Ser	Phe	Leu	Thr	Gly	Tyr	Leu	Phe	Gly	Leu	Gly	Met	Thr		
145					150					155					160		
Leu	Val	Ile	Phe	His	Leu	Ser	Phe	Cys	Ser	Ser	His	Glu	Ile	Gln	His		
				165					170					175			
Phe	Phe	Cys	Asp	Thr	Pro	Pro	Val	Leu	Ser	Leu	Ala	Cys	Gly	Asp	Thr		
			180					185					190				
Gly	Pro	Ser	Glu	Leu	Arg	Ile	Phe	Ile	Leu	Ser	Leu	Leu	Val	Leu	Leu		
		195					200						205				
Val	Ser	Phe	Phe	Phe	Ile	Thr	Ile	Ser	Tyr	Ala	Tyr	Ile	Leu	Ala	Ala		
						215					220						
Ile	Leu	Arg	Ile	Pro	Ser	Ala	Glu	Gly	Gln	Lys	Lys	Ala	Phe	Ser	Thr		
225					230					235					240		
Cys	Ala	Ser	His	Leu	Thr	Val	Val	Ile	Ile	His	Tyr	Gly	Cys	Ala	Ser		
				245					250					255			
Phe	Val	Tyr	Leu	Arg	Pro	Lys	Ala	Ser	Tyr	Ser	Leu	Glu	Arg	Asp	Gln		
			260					265					270				
Leu	Ile	Ala	Met	Thr	Tyr	Thr	Val	Val	Thr	Pro	Leu	Leu	Asn	Pro	Ile		
			275				280						285				
Val	Tyr	Ser	Leu	Arg	Thr	Arg	Ala	Ile	Gln	Thr	Ala	Leu	Arg	Asn	Ala		
			290			295						300					

Phe Arg Gly Arg Leu Leu Gly Lys Gly
305 310

<210> 416
<211> 942
<212> DNA
<213> Homo sapiens

<400> 416
atggggcaga ccaacgtaac ctcttgagg gattttgtct tcctgggctt ctccagttct 60
ggggagttgc agctccttct ctttgccctg ttctctctctc tgtatctagt cactctgacc 120
agcaatgtct tcattatcat agccatcagg ctggatagcc atctgcacac ccccatgtac 180
ctcttccttt ccttcctatc cttctctgag acctgctaca ctttgggcat catccctaga 240
atgctctctg gcctggctgg gggggaccag gctatctcct atgtgggctg tgctgccag 300
atgttctttt ctgcctcatg ggctgtact aactgcttcc ttctggctgc catgggcttt 360
gacagatatg tggccatctg tgctccactc cactatgcca gccacatgaa tcctaccctc 420
tgtgcccagc tggtcattac ttcttctctg actggatacc tctttggact gggaatgaca 480
ctagtatttt tccacctctc attctgcagc tcccatgaaa tccagcactt tttttgtgac 540
acgccacctg tgctgagcct agcctgtgga gatacaggcc cgagtgaact gaggatcttt 600
atcctcagtc ttttggctct cttgggtctc ttcttcttca tcaccatctc ctacgcctac 660
atcttggcag caatactgag gatccctct gctgaggggc agaagaaggc cttctccact 720
tgtgcctcgc accttacagt ggtcattatt cattatggct gtgcttctt cgtgtacctg 780
aggcccaaag ccagctactc tcttgagaga gatcagctta ttgccatgac ctatactgta 840
gtgaccccc tccttaatcc cattgtttat agtctaagga ctagggtat acagacagct 900
ctgaggaatg ctttcagagg gagattgctg ggtaaaggat ga 942

<210> 417
<211> 316
<212> PRT
<213> Homo sapiens

<400> 417
Met Glu Ala Ala Asn Glu Ser Ser Glu Gly Ile Ser Phe Val Leu Leu
1 5 10 15
Gly Leu Thr Thr Ser Pro Gly Gln Gln Arg Pro Leu Phe Val Leu Phe
20 25 30
Leu Leu Leu Tyr Val Ala Ser Leu Leu Gly Asn Gly Leu Ile Val Ala
35 40 45
Ala Ile Gln Ala Ser Pro Ala Leu His Ala Pro Met Tyr Phe Leu Leu
50 55 60
Ala His Leu Ser Phe Ala Asp Leu Cys Phe Ala Ser Val Thr Val Pro
65 70 75 80
Lys Met Leu Ala Asn Leu Leu Ala His Asp His Ser Ile Ser Leu Ala
85 90 95
Gly Cys Leu Thr Gln Met Tyr Phe Phe Phe Ala Leu Gly Val Thr Asp
100 105 110
Ser Cys Leu Leu Ala Ala Met Ala Tyr Asp Cys Tyr Val Ala Ile Arg
115 120 125
His Pro Leu Pro Tyr Ala Thr Arg Met Ser Arg Ala Met Cys Ala Ala
130 135 140

Leu Val Gly Met Ala Trp Leu Val Ser His Val His Ser Leu Leu Tyr
 145 150 155 160
 Ile Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Ser His Gln Val Pro
 165 170 175
 His Phe Phe Cys Asp His Gln Pro Leu Leu Arg Leu Ser Cys Ser Asp
 180 185 190
 Thr His His Ile Gln Leu Leu Ile Phe Thr Glu Gly Ala Ala Val Val
 195 200 205
 Val Thr Pro Phe Leu Leu Ile Leu Ala Ser Tyr Gly Ala Ile Ala Ala
 210 215 220
 Ala Val Leu Gln Leu Pro Ser Ala Ser Gly Arg Leu Arg Ala Val Ser
 225 230 235 240
 Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr Gly Thr Val
 245 250 255
 Ile Ala Val Tyr Phe Gln Ala Thr Ser Arg Arg Glu Ala Glu Trp Gly
 260 265 270
 Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
 275 280 285
 Ile Ile Tyr Ser Leu Trp Asn Arg Asp Val Gln Gly Ala Leu Arg Ala
 290 295 300
 Leu Leu Ile Gly Arg Arg Ile Ser Ala Ser Asp Ser
 305 310 315

<210> 418
 <211> 951
 <212> DNA
 <213> Homo sapiens

<400> 418
 atggaggctg ccaatgagtc ttcagagggga atctcattcg ttttattggg actgacaaca 60
 agtcctggac agcagcggcc tctctttgtg ctgttcttgc tcttgatgt ggccagcctc 120
 ctgggtaatg gactcattgt ggctgccatc caggccagtc cagcccttca tgcacccatg 180
 tacttcctgc tggcccacct gtcctttgct gacctctgtt tcgcctccgt cactgtgccc 240
 aagatgttg ccaacttggt ggcccatgac cactccatct cgctggctgg ctgcctgacc 300
 caaatgtact tcttctttgc cctgggggta actgatagct gtcttctggc ggccatggcc 360
 tatgactgct acgtggccat ccggcacccc ctcccctatg ccacgaggat gtcccgggcc 420
 atgtgcgcag ccctgggtgg aatggcatgg ctgggtgtccc acgtccactc cctcctgtat 480
 atcctgctca tggctcgctt gtccttctgt gcttcccacc aagtgccccca cttcttctgt 540
 gaccaccagc ctctcttaag gctctcgtgc tctgacaccc accacatcca gctgctcatc 600
 ttcaccgagg gcgcgcaggt ggtggctact cccttctgc tcatcctcgc ctccatagg 660
 gccatcgcag ctgcctgtgt ccagctgccc tcagcctctg ggaggctccg ggctgtgtcc 720
 acctgtggct cccacctggc tgtgggtgag ctcttctatg ggacagtcac tgcagtctac 780
 ttccaggcca catcccgacg cgaggcagag tggggccgtg tggccactgt catgtacact 840
 gtagtcaccc ccattgtgaa ccccatcatc tacagcctct ggaatcgca tgtacagggg 900
 gcactccgag cccttctcat tgggcgaagg atctcagcta gtgactcctg a 951

<210> 419
 <211> 311

<212> PRT
<213> Homo sapiens

<400> 419

Met	Gly	Ser	Phe	Asn	Thr	Ser	Phe	Glu	Asp	Gly	Phe	Ile	Leu	Val	Gly	
1				5				10						15		
Phe	Ser	Asp	Trp	Pro	Gln	Leu	Glu	Pro	Ile	Leu	Phe	Val	Phe	Ile	Phe	
		20					25					30				
Ile	Phe	Tyr	Ser	Leu	Thr	Leu	Phe	Gly	Asn	Thr	Ile	Ile	Ile	Ala	Leu	
		35					40					45				
Ser	Trp	Leu	Asp	Leu	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser	
	50					55					60					
His	Leu	Ser	Leu	Leu	Asp	Leu	Cys	Phe	Thr	Thr	Ser	Thr	Val	Pro	Gln	
65					70					75					80	
Leu	Leu	Ile	Asn	Leu	Cys	Gly	Val	Asp	Arg	Thr	Ile	Thr	Arg	Gly	Gly	
			85						90					95		
Cys	Val	Ala	Gln	Leu	Phe	Ile	Tyr	Leu	Ala	Leu	Gly	Ser	Thr	Glu	Cys	
		100						105					110			
Val	Leu	Leu	Val	Val	Met	Ala	Phe	Asp	Arg	Tyr	Ala	Ala	Val	Cys	Arg	
	115					120						125				
Pro	Leu	His	Tyr	Met	Ala	Ile	Met	His	Pro	His	Leu	Cys	Gln	Thr	Leu	
	130					135					140					
Ala	Ile	Ala	Ser	Trp	Gly	Ala	Gly	Phe	Val	Asn	Ser	Leu	Ile	Gln	Thr	
145					150					155					160	
Gly	Leu	Ala	Met	Ala	Met	Pro	Leu	Cys	Gly	His	Arg	Leu	Asn	His	Phe	
			165						170					175		
Phe	Cys	Glu	Met	Pro	Val	Phe	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Thr	Glu	
		180						185					190			
Gly	Thr	Glu	Ala	Lys	Met	Phe	Val	Ala	Arg	Val	Ile	Val	Val	Ala	Val	
	195						200					205				
Pro	Ala	Ala	Leu	Ile	Leu	Gly	Ser	Tyr	Val	His	Ile	Ala	His	Ala	Val	
	210					215					220					
Leu	Arg	Val	Lys	Ser	Thr	Ala	Gly	Arg	Arg	Lys	Ala	Phe	Gly	Thr	Cys	
225					230					235					240	
Gly	Ser	His	Leu	Leu	Val	Val	Phe	Leu	Phe	Tyr	Gly	Ser	Ala	Ile	Tyr	
			245						250					255		
Thr	Tyr	Leu	Gln	Ser	Ile	His	Asn	Tyr	Ser	Glu	Arg	Glu	Gly	Lys	Phe	
		260						265					270			
Val	Ala	Leu	Phe	Tyr	Thr	Ile	Ile	Thr	Pro	Ile	Leu	Asn	Pro	Leu	Ile	
		275					280					285				
Tyr	Thr	Leu	Arg	Asn	Lys	Asp	Val	Lys	Gly	Ala	Leu	Trp	Lys	Val	Leu	
	290					295						300				

Trp Arg Gly Arg Asp Ser Gly
305 310

<210> 420
<211> 936
<212> DNA
<213> Homo sapiens

<400> 420
atgggaagtt tcaacaccag ttttgaagat ggcttcattt tggtagggatt ctcagattgg 60
ccgcaactgg agcccatcct gtttgtcttt atttttattt tctactccct aactctcttt 120
ggcaacacca tcatcatcgc tctctcctgg cttagacctt ggctgcacac acctatgtac 180
ttctttctct ctcatctgtc cctcctggac ctctgcttca ccaccagcac cgtgccccag 240
ctcctgatca acctttgcgg ggtggaccgc accatcaccc gtggaggggtg tgtggctcag 300
ctcttcatct acctagccct gggctccaca gagtgtgtgc tcctgggtgg gatggccttt 360
gaccgctatg ctgctgtctg tcgtccactc cactacatgg ccacatgca cccccatctc 420
tgccagaccc tggctatcgc ctctcctggg gcgggtttcg tgaactctct gatccagaca 480
gggtctcgcaa tggccatgcc tctctgtggc catcgactga atcacttctt ctgtgagatg 540
cctgtattttc tgaagttggc ttgtgctggc acagaaggaa cagaggccaa gatgtttgtg 600
gcccagagtc tagtcgtggc tgttcctgca gcaattattc taggctccta tgtgcacatt 660
gtcatgacag tgctgagggt gaagtcaacg gctgggcgca gaaaggcttt tgggacttgt 720
gggtcccacc tcctagtagt tttccttttt tatggctcag ccactctacac atatctccaa 780
tccatccaca attattctga gcgtgaggga aaatttggtt ccctttttta tactataatt 840
acccccattc tcaatcctct catttataca ctaagaaaca aggacgtgaa gggggctctg 900
tggaaggtac tatggagggg cagggactca gggtag 936

<210> 421
<211> 312
<212> PRT
<213> Homo sapiens

<400> 421
Met Glu Asn Tyr Asn Gln Thr Ser Thr Asp Phe Ile Leu Leu Gly Leu
1 5 10 15
Phe Pro Pro Ser Ile Ile Asp Leu Phe Phe Phe Ile Leu Ile Val Phe
20 25 30
Ile Phe Leu Met Ala Leu Ile Gly Asn Leu Ser Met Ile Leu Leu Ile
35 40 45
Phe Leu Asp Thr His Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln
50 55 60
Leu Ser Leu Ile Asp Leu Asn Tyr Ile Ser Thr Ile Val Pro Lys Met
65 70 75 80
Ala Ser Asp Phe Leu His Gly Asn Lys Ser Ile Ser Phe Thr Gly Cys
85 90 95
Gly Ile Gln Ser Phe Phe Phe Leu Ala Leu Gly Gly Ala Glu Ala Leu
100 105 110
Leu Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Phe Pro
115 120 125
Leu His Tyr Leu Ile Arg Met Ser Lys Arg Val Cys Val Leu Met Ile
130 135 140

Thr Gly Ser Trp Ile Ile Gly Ser Ile Asn Ala Cys Ala His Thr Val
 145 150 155 160
 Tyr Val Leu His Ile Pro Tyr Cys Arg Ser Arg Ala Ile Asn His Phe
 165 170 175
 Phe Cys Asp Val Pro Ala Met Val Thr Leu Ala Cys Met Asp Thr Trp
 180 185 190
 Val Tyr Glu Gly Thr Val Phe Leu Ser Ala Thr Ile Phe Leu Val Phe
 195 200 205
 Pro Phe Ile Gly Ile Ser Cys Ser Tyr Gly Gln Val Leu Phe Ala Val
 210 215 220
 Tyr His Met Lys Ser Ala Glu Gly Arg Lys Lys Ala Tyr Leu Thr Cys
 225 230 235 240
 Ser Thr His Leu Thr Val Val Thr Phe Tyr Tyr Ala Pro Phe Val Tyr
 245 250 255
 Thr Tyr Leu Arg Pro Arg Ser Leu Arg Ser Pro Thr Glu Asp Lys Val
 260 265 270
 Leu Ala Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Ile Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Glu Val Met Gly Ala Leu Thr Arg Val Ser
 290 295 300
 Gln Arg Ile Cys Ser Val Lys Met
 305 310

<210> 422
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 422
 atggaattt acaatcaaac atcaactgat ttcattcttat tggggctggt tccaccatca 60
 ataattgacc ttttcttctt cattctcatt gttttcattt tcctgatggc tctaattgga 120
 aacctgtcca tgattcttct catcttcttg gacacccatc tccacacacc catgtatttc 180
 ctactgagtc agctctccct cattgacctt aattacatct ccaccattgt tcctaagatg 240
 gcatctgatt ttctgcatgg aaacaagtct atctccttca ctgggtgtgg gattcagagt 300
 ttcttcttct tggcattagg aggtgcagaa gcaactacttt tggcatctat ggcctatgat 360
 cgttacattg ctatttgctt tcctctccac tatctcatcc gcatgagcaa aagagtgtgt 420
 gtgctgatga taacagggtc ttggatcata ggctcgatca atgcttgtgc tcacactgta 480
 tatgtactcc atattcctta ttgccgatcc agggccatca atcatttctt ctgtgatgtc 540
 ccagcaatgg tgactctggc ctgcatggac acctgggtct atgagggcac agtgtttttg 600
 agtgccacca tctttctcgt gtttcccttc attggatttt catgttctta tggccagggt 660
 ctctttgctg tctaccacat gaaatctgca gaagggagga agaaagccta tttgacctgc 720
 agcaccacc tcaactgtagt aactttctac tatgcacctt ttgtctacac ttatctacgt 780
 ccaagatccc tgcgatctcc aacagaggac aagggtctgg ctgtcttcta caccatcctc 840
 accccaatgc tcaaccccat catctatagc ctgaggaaca aggaggtgat gggggccctg 900
 acacgagtga gtcagagaat ctgctctgtg aaaatgtag 939

<210> 423
 <211> 327
 <212> PRT

<213> Homo sapiens

<400> 423

Met	Glu	Trp	Arg	Asn	His	Ser	Gly	Arg	Val	Ser	Glu	Phe	Val	Leu	Leu		
1				5					10					15			
Gly	Phe	Pro	Ala	Pro	Ala	Pro	Leu	Gln	Val	Leu	Leu	Phe	Ala	Leu	Leu		
			20					25					30				
Leu	Leu	Ala	Tyr	Val	Leu	Val	Leu	Thr	Glu	Asn	Thr	Leu	Ile	Ile	Met		
		35					40					45					
Ala	Ile	Arg	Asn	His	Ser	Thr	Leu	His	Lys	Pro	Met	Tyr	Phe	Phe	Leu		
	50					55					60						
Ala	Asn	Met	Ser	Phe	Leu	Glu	Ile	Trp	Tyr	Val	Thr	Val	Thr	Ile	Pro		
65					70					75					80		
Lys	Met	Leu	Ala	Gly	Phe	Val	Gly	Ser	Lys	Gln	Asp	His	Gly	Gln	Leu		
				85					90					95			
Ile	Ser	Phe	Glu	Gly	Cys	Met	Thr	Gln	Leu	Tyr	Phe	Phe	Leu	Gly	Leu		
			100					105					110				
Gly	Cys	Thr	Glu	Cys	Val	Leu	Leu	Ala	Val	Met	Ala	Tyr	Asp	Arg	Tyr		
		115					120					125					
Met	Ala	Ile	Cys	Tyr	Pro	Leu	His	Tyr	Pro	Val	Ile	Val	Ser	Gly	Arg		
	130					135					140						
Leu	Cys	Val	Gln	Met	Ala	Ala	Gly	Ser	Trp	Ala	Gly	Gly	Phe	Gly	Ile		
145					150					155					160		
Ser	Met	Val	Lys	Val	Phe	Leu	Ile	Ser	Gly	Leu	Ser	Tyr	Cys	Gly	Pro		
			165						170					175			
Asn	Ile	Ile	Asn	His	Phe	Phe	Cys	Asp	Val	Ser	Pro	Leu	Leu	Asn	Leu		
			180					185					190				
Ser	Cys	Thr	Asp	Met	Ser	Thr	Ala	Glu	Leu	Thr	Asp	Phe	Ile	Leu	Ala		
		195					200					205					
Ile	Phe	Ile	Leu	Leu	Gly	Pro	Leu	Ser	Val	Thr	Gly	Ala	Ser	Tyr	Val		
	210					215					220						
Ala	Ile	Thr	Gly	Ala	Val	Met	His	Ile	Ser	Ser	Ala	Ala	Gly	Arg	Tyr		
225					230					235					240		
Lys	Ala	Phe	Ser	Thr	Cys	Ala	Ser	His	Leu	Thr	Val	Val	Ile	Ile	Phe		
				245					250					255			
Tyr	Ala	Ala	Ser	Ile	Phe	Ile	Tyr	Ala	Arg	Pro	Lys	Ala	Leu	Ser	Ala		
		260						265					270				
Phe	Asp	Thr	Asn	Lys	Leu	Val	Ser	Val	Leu	Tyr	Ala	Val	Ile	Val	Pro		
	275						280					285					
Leu	Leu	Asn	Pro	Ile	Ile	Tyr	Cys	Leu	Arg	Asn	Gln	Glu	Val	Lys	Arg		
	290					295					300						
Ala	Leu	Cys	Cys	Thr	Leu	His	Leu	Tyr	Gln	His	Gln	Asp	Pro	Asp	Pro		

305

310

315

320

Lys Lys Ala Ser Arg Asn Val
325

<210> 424

<211> 984

<212> DNA

<213> Homo sapiens

<400> 424

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actgagaaca cactcatcat tatggcaatt aggaaccatt ctaccctcca caaaccatg 180
tacttttttc tagctaatat gtcctttctg gagatctggg atgtcactgt cactattccc 240
aagatgcttg ctggccttgt tggatccaaa caggatcatg gacagctaata ctcctttgag 300
ggatgcatga cacagctcta ctttttcctt ggcttgggct gcaactgagt tgtccttctc 360
gctgttatgg cctatgatcg ctatatggcc atctgctatc ctctccacta cccagtcatt 420
gtcagtggcc ggctgtgtgt gcagatggct gctggctcct gggctggagg ttttggcatc 480
tccatgggtca aagtttttct tatttctggc ctctcttact gtggcccca catcatcaac 540
cactttttct gtgatgtctc tccattgctc aacctctcat gcaactgatat gtccacagca 600
gagcttacag atttcactct ggccattttt attcttctag ggccactctc tgtcactggg 660
gctcctatg tggccattac tgggtgctgt atgcacatat cttcggtgctc tggacgctat 720
aaggcctttt ccacctgtgc ctctcatctc actgttgtga taatcttcta tgcagccagt 780
atcttcatct atgtctggcc aaaggcactc tcagcttttg acaccaacaa gttggtctct 840
gtactgtatg ctgtcattgt accattgctc aatcccatca tttactgcct gcgcaatcaa 900
gaggtcaaga gagccctatg ctgtactctg cacctgtacc agcaccagga tcctgacccc 960
aagaaagcta gcagaaatgt atag                                     984

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<210> 425

<211> 322

<212> PRT

<213> Homo sapiens

<400> 425

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Met Glu Pro Gln Asn Thr Ser Thr Val Thr Asn Phe Gln Leu Leu Gly
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Phe Gln Asn Leu Leu Glu Trp Gln Ala Leu Leu Phe Val Ile Phe Leu
      20              25              30

Leu Ile Tyr Cys Leu Thr Ile Ile Gly Asn Val Val Ile Ile Thr Val
      35              40              45

Val Ser Gln Gly Leu Arg Leu His Ser Pro Met Tyr Met Phe Leu Gln
      50              55              60

His Leu Ser Phe Leu Glu Val Trp Tyr Thr Ser Thr Thr Val Pro Leu
      65              70              75              80

Leu Leu Ala Asn Leu Leu Ser Trp Gly Gln Ala Ile Ser Phe Ser Ala
      85              90              95

Cys Met Ala Gln Leu Tyr Phe Phe Val Phe Leu Gly Ala Thr Glu Cys
      100             105             110

Phe Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Ser
      115             120             125

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Pro Leu Arg Tyr Pro Phe Leu Met His Arg Gly Leu Cys Ala Arg Leu
 130 135 140
 Val Val Val Ser Trp Cys Thr Gly Val Ser Thr Gly Phe Leu His Ser
 145 150 155 160
 Met Met Ile Ser Arg Leu Asp Phe Cys Gly Arg Asn Gln Ile Asn His
 165 170 175
 Phe Phe Cys Asp Leu Pro Pro Leu Met Gln Leu Ser Cys Ser Arg Val
 180 185 190
 Tyr Ile Thr Glu Val Thr Ile Phe Ile Leu Ser Ile Ala Val Leu Cys
 195 200 205
 Ile Cys Phe Phe Leu Thr Leu Gly Pro Tyr Val Phe Ile Val Ser Ser
 210 215 220
 Ile Leu Arg Ile Pro Ser Thr Ser Gly Arg Arg Lys Thr Phe Ser Thr
 225 230 235 240
 Cys Gly Ser His Leu Ala Val Val Thr Leu Tyr Tyr Gly Thr Met Ile
 245 250 255
 Ser Met Tyr Val Cys Pro Ser Pro His Leu Leu Pro Glu Ile Asn Lys
 260 265 270
 Ile Ile Ser Val Phe Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Val
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Phe Lys Glu Ala Val Arg Lys Val
 290 295 300
 Met Arg Arg Lys Cys Gly Ile Leu Trp Ser Thr Ser Lys Arg Lys Phe
 305 310 315 320
 Leu Tyr

<210> 426
 <211> 969
 <212> DNA
 <213> Homo sapiens

<400> 426
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 gggaatgttg tcatcatcac cgtggtgagc cagggcctgc gactgcactc ccctatgtac 180
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 ctctagacca acctgctgtc ctggggccaa gccatctcct tctctgectg catggcacag 300
 ctctacttct tcgtattcct cggcgccacc gagtgctttc tcttggcctt catggcctat 360
 gaccgttacc tggccatctg cagcccactc cgctaccctt ttctcatgca tcgtgggcta 420
 tgtgccaggt tgggtggtggt ctcatggtgc acaggggtca gcacaggctt tctgcattcc 480
 atgatgattt ccagggttgga cttctgtggg cgcaatcaga ttaaccattt cttctgcgac 540
 ctcccgccac tcatgcagct ctctgttcc agagtttata tcaccgaggt gaccatcttc 600
 atcctgtcaa ttgccgtgct gtgcatttgt tttttctga cactggggcc ctatgttttc 660
 attgtgtcct ccatttgag aatcccttcc acctctggcc ggagaaagac cttttccaca 720
 tgtggctccc acctggctgt tgtcactctc tactacggga ccatgatctc catgtatgtg 780
 tgtcccagtc cccacctgtt gcctgaaatc aacaagatca tttctgtctt ctacactgtg 840
 gtcacaccac tgctgaaccc agttatctac agcttgagga acaaagactt caaagaagct 900

gtagaaagg tcatgagaag gaaatgtggt attctatgga gtacaagtaa aaggaagttc 960
 ctttattag 969

<210> 427
 <211> 338
 <212> PRT
 <213> Homo sapiens

<400> 427
 Met Phe Tyr Val Asn Gln Ile Pro Phe Gln Leu Tyr His Ile Ser Phe
 1 5 10 15
 Val Tyr Pro Thr Glu Leu Trp Ser Arg Ala Ile Ile Pro Cys Met Pro
 20 25 30
 Thr Leu Ser Phe Trp Val Cys Ser Ala Thr Pro Val Ser Pro Gly Phe
 35 40 45
 Phe Ala Leu Ile Leu Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val
 50 55 60
 Val Lys Ile Ile Leu Ile His Ile Asp Ser Arg Leu His Thr Pro Met
 65 70 75 80
 Tyr Phe Leu Leu Ser Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser
 85 90 95
 Thr Ile Val Pro Lys Met Leu Val Asp Gln Val Met Ser Gln Arg Ala
 100 105 110
 Ile Ser Phe Ala Gly Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu
 115 120 125
 Ala Gly Ala Glu Phe Phe Leu Leu Gly Leu Met Ser Cys Asp Arg Tyr
 130 135 140
 Val Ala Ile Cys Asn Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys
 145 150 155 160
 Ile Cys Trp Leu Ile Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp
 165 170 175
 Gly Phe Leu Leu Thr Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser
 180 185 190
 Arg Glu Ile Asn His Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu
 195 200 205
 Ser Cys Thr Asp Thr Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys
 210 215 220
 Ile Met Met Leu Leu Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr
 225 230 235 240
 Arg Ile Leu Ile Thr Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg
 245 250 255
 Lys Ala Val Ala Thr Cys Ser Ser His Met Val Val Val Ser Leu Phe
 260 265 270

Tyr Gly Ala Ala Met Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr
275 280 285

Pro Glu Gln Asp Lys Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro
290 295 300

Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly
305 310 315 320

Ala Leu Gln Lys Val Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr
325 330 335

Thr Phe

<210> 428
<211> 1017
<212> DNA
<213> Homo sapiens

<400> 428
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gagctatgga gcagagcaat tattccgtgt atgccgactt tatccttctg ggtttggtca 120
gcaacgcccg tttcccttgg cttcttttgcc ctcatctctc tgggtcttctg gacctccata 180
gccagcaacg tgggtcaagat cattctctatc cacatagact cccgcctcca caccctcatg 240
tacttctctg tcagccagct ctccctcagg gacatcctgt atatttccac cattgtgccc 300
aaaatgctgg tcgaccaggt gatgagccag agagccattt cctttgctgg atgcactgcc 360
caacacttcc tctacttgac ctttagcaggg gctgagttct tcctcctagg actcatgtcc 420
tgtgatcgct acgtagccat ctgcaaccct ctgcaactatc ctgacctcat gagccgcaag 480
atctgctggg tgattgtggc ggcagccctg ctgggagggt ctatcgatgg tttcttgctc 540
accccgctca ccattcagtt ccccttctgt gcctctcggg agatcaacca cttcttctgc 600
gaggtgcctg cccttctgaa gctctcctgc acggacacat cagcctacga gacagccatg 660
tatgtctgct gtattatgat gctcctcctc cctttctctg tgatctcggg ctcttacaca 720
agaattctca ttactgttta taggatgagc gaggcagagg ggaggcgaaa ggctgtggcc 780
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atcctcactc ccatgctcaa tccactcatt tacagcctta ggaacaagga tgtcacgggg 960
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<210> 429
<211> 324
<212> PRT
<213> Homo sapiens

<400> 429
Met Gly Met Glu Gly Leu Leu Gln Asn Ser Thr Asn Phe Val Leu Thr
1 5 10 15
Gly Leu Ile Thr His Pro Ala Phe Pro Gly Leu Leu Phe Ala Ile Val
20 25 30
Phe Ser Ile Phe Val Val Ala Ile Thr Ala Asn Leu Val Met Ile Leu
35 40 45
Leu Ile His Met Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu
50 55 60
Ser Gln Leu Ser Ile Met Asp Thr Ile Tyr Ile Cys Ile Thr Val Pro
65 70 75 80

Lys Met Leu Gln Asp Leu Leu Ser Lys Asp Lys Thr Ile Ser Phe Leu
 85 90 95
 Gly Cys Ala Val Gln Ile Phe Leu Tyr Leu Thr Leu Ile Gly Gly Glu
 100 105 110
 Phe Phe Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Val Cys
 115 120 125
 Asn Pro Leu Arg Tyr Pro Leu Leu Met Asn Arg Arg Val Cys Leu Phe
 130 135 140
 Met Val Val Gly Ser Trp Val Gly Gly Ser Leu Asp Gly Phe Met Leu
 145 150 155 160
 Thr Pro Val Thr Met Ser Phe Pro Phe Cys Arg Ser Arg Glu Ile Asn
 165 170 175
 His Phe Phe Cys Glu Ile Pro Ala Val Leu Lys Leu Ser Cys Thr Asp
 180 185 190
 Thr Ser Leu Tyr Glu Thr Leu Met Tyr Ala Cys Cys Val Leu Met Leu
 195 200 205
 Leu Ile Pro Leu Ser Val Ile Ser Val Ser Tyr Thr His Ile Leu Leu
 210 215 220
 Thr Val His Arg Met Asn Ser Ala Glu Gly Arg Arg Lys Ala Phe Ala
 225 230 235 240
 Thr Cys Ser Ser His Ile Met Val Val Ser Val Phe Tyr Gly Ala Ala
 245 250 255
 Phe Tyr Thr Asn Val Leu Pro His Ser Tyr His Thr Pro Glu Lys Asp
 260 265 270
 Lys Val Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro
 275 280 285
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Ala Ala Ala Leu Arg Lys
 290 295 300
 Val Leu Gly Arg Cys Gly Ser Ser Gln Ser Ile Arg Val Ala Thr Val
 305 310 315 320
 Ile Arg Lys Gly

<210> 430
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 430
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 acagccaact tgggtcatgat tctgctcacc cacatggact cccgcctcca cacacccatg 180
 tacttcttgc tcagccagct ctccatcatg gataccatct acatctgtat cactgtcccc 240
 aagatgctcc aggacctcct gtccaaggac aagaccattt ccttcctggg ctgtgcagtt 300

Val Arg Tyr Arg Ala Ala Ser Arg Ser Ser Lys Ala Phe Ser Thr Leu
 225 230 235 240

Ser Ala His Ile Thr Val Val Thr Leu Phe Phe Ala Pro Cys Val Phe
 245 250 255

Ile Tyr Val Trp Pro Phe Ser Arg Tyr Ser Val Asp Lys Ile Leu Ser
 260 265 270

Val Phe Tyr Thr Ile Phe Thr Pro Leu Leu Asn Pro Ile Ile Tyr Thr
 275 280 285

Leu Arg Asn Gln Glu Val Lys Ala Ala Ile Lys Lys Arg Leu Cys Ile
 290 295 300

<210> 432
 <211> 915
 <212> DNA
 <213> Homo sapiens

<400> 432
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 ggaaacctgc tcatcttggg gactgtgacc ttgtattcgc tccttcacac accaatgtat 180
 tttctgctta gcaacctctc ctgcattgat atgatcctgg cttcttttgc tacccttaag 240
 atgattgtag atttcctccg agaacgtaag accatctcat ggtggggatg ttattcccag 300
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 gacaggtatg ttgccatatg caaacccttc cattacatga ccacatgag ccacgggtg 420
 ctcactgggc tactgttata ctcctatgca gttggatttg tgcactcatc tagtcaaatg 480
 gcttttcattg tgactttgcc cttctgtggt cccaatgtta tagacagctt tttctgtgac 540
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 gctgacagtg ggctcctgtc actggtctgc ttctcctctc tgcttgtctc ctatggagtc 660
 ataataattct cagttaggta ccgtgctgct agtcgatcct ctaaggcttt ctccactctc 720
 tcagctcaca tcacagttgt gactctgttc tttgctccgt gtgtctttat ctacgtctgg 780
 cccttcagca gatactcggg agataaaatt ctttctgtgt ttacacaaat tttcacacct 840
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 agactctgca tataa 915

<210> 433
 <211> 348
 <212> PRT
 <213> Homo sapiens

<400> 433
 Met Asp Asn Ile Thr Trp Met Ala Ser His Thr Gly Trp Ser Asp Phe
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Ile Leu Met Gly Leu Phe Arg Gln Ser Lys His Pro Met Ala Asn Ile
 20 25 30

Thr Trp Met Ala Asn His Thr Gly Trp Ser Asp Phe Ile Leu Leu Gly
 35 40 45

Leu Phe Arg Gln Ser Lys His Pro Ala Leu Leu Cys Val Val Ile Phe
 50 55 60

Val Val Phe Leu Met Ala Leu Ser Gly Asn Ala Val Leu Ile Leu Leu

65	70	75	80
Ile His Cys Asp	Ala His Leu His Thr	Pro Met Tyr Phe Phe	Ile Ser
	85	90	95
Gln Leu Ser	Leu Met Asp Met Ala Tyr	Ile Ser Val Thr	Val Pro Lys
	100	105	110
Met Leu Leu Asp	Gln Val Met Gly Val	Asn Lys Ile Ser	Ala Pro Glu
	115	120	125
Cys Gly Met	Gln Met Phe Phe Tyr	Val Thr Leu Ala	Gly Ser Glu Phe
	130	135	140
Phe Leu Leu Ala	Thr Met Ala Tyr Asp	Arg Tyr Val Ala	Ile Cys His
	145	150	155
Pro Leu Arg Tyr	Pro Val Leu Met Asn	His Arg Val Cys	Leu Phe Leu
	165	170	175
Ser Ser Gly	Cys Trp Phe Leu Gly	Ser Val Asp Gly	Phe Thr Phe Thr
	180	185	190
Pro Ile Thr	Met Thr Phe Pro Phe	Arg Gly Ser Arg	Glu Ile His His
	195	200	205
Phe Phe Cys	Glu Val Pro Ala Val	Leu Asn Leu Ser	Cys Ser Asp Thr
	210	215	220
Ser Leu Tyr	Glu Ile Phe Met Tyr	Leu Cys Cys Val	Leu Met Leu Leu
	225	230	235
Ile Pro Val	Val Ile Ile Ser Ser	Ser Tyr Leu Leu	Ile Leu Leu Thr
	245	250	255
Ile His Gly	Met Asn Ser Ala Glu	Gly Arg Lys Lys	Ala Phe Ala Thr
	260	265	270
Cys Ser Ser	His Leu Thr Val Val	Ile Leu Phe Tyr	Gly Ala Ala Ile
	275	280	285
Tyr Thr Tyr	Met Leu Pro Ser Ser	Tyr His Thr Pro	Glu Lys Asp Met
	290	295	300
Met Val Ser	Val Phe Tyr Thr Ile	Leu Thr Pro Val	Val Asn Pro Leu
	305	310	315
Ile Tyr Ser	Leu Arg Asn Lys Asp	Val Met Gly Ala	Leu Lys Lys Met
	325	330	335
Leu Thr Val	Glu Pro Ala Phe Gln	Lys Ala Met Glu	
	340	345	

<210> 434

<211> 1047

<212> DNA

<213> Homo sapiens

<400> 434

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tggtcggatt tcatcctggt gggactcttc agacaatcca aacatccagc actactttgt 180
gtgggtcattt ttgtgggttt cctgatggcg ttgtctggaa atgctgtcct gatccttctg 240
atacactgtg acgcccacct ccacaccccc atgtactttt tcatcagtca attgtctctc 300
atggacatgg cgtacatttc tgtcactgtg cccaagatgc tcctggacca ggtcatgggt 360
gtgaataaga tctcagcccc tgagtgtggg atgcagatgt tcttctacgt gacactagca 420
ggttcagaat ttttccttct agccaccatg gcctatgacc gctacgtggc catctgccat 480
cctctccgtt accctgtcct catgaaccat aggggtgtgtc tcttcctgtc atcaggctgc 540
tggttcctgg gctcagtggg tggcttcaca ttcactccca tcaccatgac cttccccttc 600
cgtggatccc gggagattca tcatttcttc tgtgaagttc ctgctgtatt gaatctctcc 660
tgctcagaca cctcactcta tgagattttc atgtacttgt gctgtgtcct catgctcctc 720
atccctgtgg tgatcatttc aagctcctat ttactcatcc tcctcaccat ccacgggatg 780
aactcagcag agggccggaa aaaggccttt gccacctgct cctcccacct gactgtggtc 840
atcctcttct atggggctgc catctacacc tacatgctcc ccagctccta ccacaccctc 900
gagaaggaca tgatgggtatc tgtcttctat accatcctca ctccagtggg gaacccttta 960
atctatagtc ttaggaataa ggatgtcatg ggggctctga agaaaatgtt aacagtggaa 1020
cctgcctttc aaaaagctat ggagtag 1047

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<210> 435
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 435

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Ile	Leu	Met	Gly	Leu	Phe	Arg	Arg	Ser	Lys	His	Pro	Ala	Leu	Leu	Ser
			20					25					30		
Val	Val	Ile	Phe	Val	Val	Phe	Leu	Lys	Ala	Leu	Ser	Gly	Asn	Ala	Val
		35					40					45			
Leu	Ile	Leu	Leu	Ile	His	Cys	Asp	Ala	His	Leu	His	Ser	Pro	Met	Tyr
	50					55					60				
Phe	Phe	Ile	Ser	Gln	Leu	Ser	Leu	Met	Asp	Met	Ala	Tyr	Ile	Ser	Val
65					70					75				80	
Thr	Val	Pro	Lys	Met	Leu	Leu	Asp	Gln	Val	Met	Gly	Val	Asn	Lys	Val
				85					90					95	
Ser	Ala	Pro	Glu	Cys	Gly	Met	Gln	Met	Phe	Leu	Tyr	Leu	Thr	Leu	Ala
			100				105						110		
Gly	Ser	Glu	Phe	Phe	Leu	Leu	Ala	Thr	Met	Ala	Tyr	Asp	Arg	Tyr	Val
		115					120					125			
Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr	Pro	Val	Leu	Met	Asn	His	Arg	Val
	130					135					140				
Cys	Leu	Phe	Leu	Ala	Ser	Gly	Cys	Trp	Phe	Leu	Gly	Ser	Val	Asp	Gly
145					150					155					160
Phe	Met	Leu	Thr	Pro	Ile	Thr	Met	Ser	Phe	Pro	Phe	Cys	Arg	Ser	Trp
				165					170					175	
Glu	Ile	His	His	Phe	Phe	Cys	Glu	Val	Pro	Ala	Val	Thr	Ile	Leu	Ser
			180					185					190		

Cys Ser Asp Thr Ser Leu Tyr Glu Thr Leu Met Tyr Leu Cys Cys Val
 195 200 205
 Leu Met Leu Leu Ile Pro Val Thr Ile Ile Ser Ser Ser Tyr Leu Leu
 210 215 220
 Ile Leu Leu Thr Val His Arg Met Asn Ser Ala Glu Gly Arg Lys Lys
 225 230 235 240
 Ala Phe Ala Thr Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr
 245 250 255
 Gly Ala Ala Val Tyr Thr Tyr Met Leu Pro Ser Ser Tyr His Thr Pro
 260 265 270
 Glu Lys Asp Met Met Val Ser Val Phe Tyr Thr Ile Leu Thr Pro Val
 275 280 285
 Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Met Gly Ala
 290 295 300
 Leu Lys Lys Met Leu Thr Val Arg Phe Val Leu
 305 310 315

<210> 436
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 436
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 aaggcggtgt ctggaaatgc tgtcctgata cttctgatac actgtgacgc ccacctccac 180
 agccccatgt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
 actgtgcca agatgtcctt ggaccaggtc atgggtgtga ataaggctct agcccctgag 300
 tgtgggatgc agatgttctt ctatctgaca ctagcagggtt cggaattttt ccttctagcc 360
 accatggcct atgaccgcta cgtggccatc tgccatcctc tccgttacct tgtcctcatg 420
 aaccataggg tctgtctttt cctggcatcg ggctgctggg tcctgggctc agtggatggc 480
 ttcatgtca ctcccatcac catgagcttc cccttctgca gatcctggga gattcatcat 540
 ttcttctgtg aagtccttgc tgtaacgata ctgtcctgct cagacacctc actctatgag 600
 accctcatgt acctatgctg tgtcctcatg ctcctcatcc ctgtgacgat catttcaagc 660
 tcctatttac tcactctcct caccgtccac aggatgaact cagcagaggg ccggaaaaag 720
 gcctttgcca cctgctcctc ccacctgact gtgggtcatcc tcttctatgg ggctgccgtc 780
 tacacctaca tgctccccag ctctaccac acccctgaga aggacatgat ggtatctgtc 840
 ttctatacca tcctcactcc ggtgctgaac cctttaatct atagtcttag gaataaggat 900
 gtcatggggg ctctgaagaa aatgttaact gtgagattcg tccttttag 948

<210> 437
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 437
 Met Pro Asn Ser Thr Thr Val Met Glu Phe Leu Leu Met Arg Phe Ser
 1 5 10 15
 Asp Val Trp Thr Leu Gln Ile Leu His Ser Ala Ser Phe Phe Met Leu
 20 25 30

Tyr Leu Val Thr Leu Met Gly Asn Ile Leu Ile Val Thr Val Thr Thr
 35 40 45
 Cys Asp Ser Ser Leu His Met Pro Met Tyr Phe Phe Leu Arg Asn Leu
 50 55 60
 Ser Ile Leu Asp Ala Cys Tyr Ile Ser Val Thr Val Pro Thr Ser Cys
 65 70 75 80
 Val Asn Ser Leu Leu Asp Ser Thr Thr Ile Ser Lys Ala Gly Cys Val
 85 90 95
 Ala Gln Val Phe Leu Val Val Phe Phe Val Tyr Val Glu Leu Leu Phe
 100 105 110
 Leu Thr Ile Met Ala His Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
 115 120 125
 His Tyr Pro Val Ile Val Asn Ser Arg Ile Cys Ile Gln Met Thr Leu
 130 135 140
 Ala Ser Leu Leu Ser Gly Leu Val Tyr Ala Gly Met His Thr Gly Ser
 145 150 155 160
 Thr Phe Gln Leu Pro Phe Cys Arg Ser Asn Val Ile His Gln Phe Phe
 165 170 175
 Cys Asp Ile Pro Ser Leu Leu Lys Leu Ser Cys Ser Asp Thr Phe Ser
 180 185 190
 Asn Glu Val Met Ile Val Val Ser Ala Leu Gly Val Gly Gly Gly Cys
 195 200 205
 Phe Ile Phe Ile Ile Arg Ser Tyr Ile His Ile Phe Ser Thr Val Leu
 210 215 220
 Gly Phe Pro Arg Gly Ala Asp Arg Thr Lys Ala Phe Ser Thr Cys Ile
 225 230 235 240
 Pro His Ile Leu Val Val Ser Val Phe Leu Ser Ser Cys Ser Ser Val
 245 250 255
 Tyr Leu Arg Pro Pro Ala Ile Pro Ala Ala Thr Gln Asp Leu Ile Leu
 260 265 270
 Ser Gly Phe Tyr Ser Ile Met Pro Pro Leu Phe Asn Pro Ile Ile Tyr
 275 280 285
 Ser Leu Arg Asn Lys Gln Ile Lys Val Ala Ile Lys Lys Ile Met Lys
 290 295 300
 Arg Ile Phe Tyr Ser Glu Asn Val
 305 310

<210> 438

<211> 939

<212> DNA

<213> Homo sapiens

<400> 438

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atgcccaatt caaccacgt gatggaattt ctcctcatga ggttttctga tgtgtggaca 60
ctacagattt tacattctgc atccttcttt atgttgtatt tggtaactct aatgggaaac 120
atcctcattg tgaccgtcac cacctgtgac agcagccttc acatgcccac gtacttcttc 180
ctcaggaatc tgtctatctt ggatgcctgc tacatttctg ttacagtccc tacctcatgt 240
gtcaattccc tactggacag caccaccatt tctaaggcgg gatgtgtagc tcaggtcttc 300
ctcgtgggtt tttttgtata tgtggagctt ctgtttctca ccattatggc tcatgaccgc 360
tatgtggctg tctgccagcc acttcactac cctgtgatcg tgaactctcg aatctgcatc 420
cagatgacac tggcctccct actcagtggc cttgtctatg caggcatgca cactggcagc 480
acattccagc tgcccttctg tcggtccaac gttattcatc aattcttctg tgacatcccc 540
tctctgctga agctctcttg ctctgacacc ttcagcaatg aggtcatgat tgttgtctct 600
gctctggggg taggtggcgg ctgtttcatc tttatcatca ggtcttacat tcacatcttt 660
tcgaccgtgc tcgggtttcc aagaggagca gacagaacaa aggccttttc cacctgcatc 720
cctcacatcc tgggtggtgc agtcttcttc agttcatgct cttctgtgta cctcaggcca 780
cctgcgatac ctgcagccac ccaggatctg atcctttctg gtttttattc cataatgcct 840
cccctcttta accctattat ttacagtctt agaaataagc aaataaagggt ggccatcaag 900
aaaatcatga agagaatttt ttattcagaa aatgtgtaa 939

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<210> 439

<211> 312

<212> PRT

<213> Homo sapiens

<400> 439

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Met Asp Gly Val Asn Asp Ser Ser Leu Gln Gly Phe Val Leu Met Gly
  1             5             10             15

```

```

Ile Ser Asp His Pro Gln Leu Glu Met Ile Phe Phe Ile Ala Ile Leu
      20             25             30

```

```

Phe Ser Tyr Leu Leu Thr Leu Leu Gly Asn Ser Thr Ile Ile Leu Leu
      35             40             45

```

```

Ser Arg Leu Glu Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
      50             55             60

```

```

Asn Leu Ser Ser Leu Asp Leu Ala Phe Ala Thr Ser Ser Val Pro Gln
      65             70             75             80

```

```

Met Leu Ile Asn Leu Trp Gly Pro Gly Lys Thr Ile Ser Tyr Gly Gly
      85             90             95

```

```

Cys Ile Thr Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Cys
      100            105            110

```

```

Ile Leu Leu Val Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Arg
      115            120            125

```

```

Pro Leu Arg Tyr Thr Ala Ile Met Asn Pro Gln Leu Cys Trp Leu Leu
      130            135            140

```

```

Ala Val Ile Ala Cys Leu Gly Gly Leu Gly Asn Ser Val Ile Gln Ser
      145            150            155            160

```

```

Thr Phe Thr Leu Gln Leu Pro Leu Cys Gly His Arg Arg Val Glu Gly
      165            170            175

```

```

Phe Leu Cys Glu Val Pro Ala Met Ile Lys Leu Ala Cys Gly Asp Thr
      180            185            190

```

```

Ser Leu Asn Gln Ala Val Leu Asn Gly Val Cys Thr Phe Phe Thr Ala

```

195

200

205

Val Pro Leu Ser Ile Ile Val Ile Ser Tyr Cys Leu Ile Ala Gln Ala
210 215 220

Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Arg Lys Ala Phe Asn Thr
225 230 235 240

Cys Leu Ser His Leu Leu Val Val Phe Leu Phe Tyr Gly Ser Ala Ser
245 250 255

Tyr Gly Tyr Leu Leu Pro Ala Lys Asn Ser Lys Gln Asp Gln Gly Lys
260 265 270

Phe Ile Ser Leu Phe Tyr Ser Leu Val Thr Pro Met Val Asn Pro Leu
275 280 285

Ile Tyr Thr Leu Arg Asn Met Glu Val Lys Gly Ala Leu Arg Arg Leu
290 295 300

Leu Gly Lys Gly Arg Glu Val Gly
305 310

<210> 440

<211> 939

<212> DNA

<213> Homo sapiens

<400> 440

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atggacgggg tgaatgatag ctcccttgac ggctttgttc tgatgggcat atcagaccat 60
ccccagctgg agatgatctt ttttatagcc atccctcttct cctatttgct gaccctactt 120
gggaactcaa ccatcatctt gctttcccg cttggaggccc ggctccatac acccatgtac 180
ttcttccctca gcaacctctc ctcccttgac cttgctttcg ctactagttc agtcccccaa 240
atgctgatca atttatgggg accaggcaag accatcagct atgggtggctg cataaccag 300
ctctatgtct tcctttggct gggggccacc gagtgcaccc tgctgggtgg gatggcattt 360
gaccgctacg tggcagtgtg ccggccccc cgtacaccg ccatcatgaa ccccagctc 420
tgctggctgc tggctgtgat tgcctgcctg ggtggcttgg gcaactctgt gatccagtca 480
acattcactc tgcagctccc attgtgtggg caccggaggg tggagggatt cctctgagag 540
gtgcttgcca tgatcaaaact ggctgtggc gacacaagtc tcaaccaggc tgtgtcatt 600
gggtgtctgca ccttcttcac tgcagtcacca ctaagcatca tctgtatctc ctactgcctc 660
attgctcagg cagtgtgaa aatccgctct gcagagggga ggcgaaaggc gttcaatacg 720
tgctctctcc atctgtgtgt ggtgttctc ttctatggct cagccagcta tgggtatctg 780
cttccggcca agaacagcaa acaggaccag ggcaagttca tttccctgtt ctactcgttg 840
gtcacacca tggatgaatc cctcatctac acgctgcgga acatggaagt gaagggcgca 900
ctgaggaggt tgctggggaa aggaagagaa gttggctga 939

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<210> 441

<211> 352

<212> PRT

<213> Homo sapiens

<400> 441

Met Thr Ser Gln Glu Arg Asp Thr Ala Ile Tyr Ser Ile Asn Val Ser
1 5 10 15

Phe Val Ala Lys Gly Met Thr Ser Arg Ser Val Cys Glu Lys Met Thr
20 25 30

Met Thr Thr Glu Asn Pro Asn Gln Thr Val Val Ser His Phe Phe Leu

35					40					45					
Glu	Gly	Leu	Arg	Tyr	Thr	Ala	Lys	His	Ser	Ser	Leu	Phe	Phe	Leu	Leu
	50					55					60				
Phe	Leu	Leu	Ile	Tyr	Ser	Ile	Thr	Val	Ala	Gly	Asn	Leu	Leu	Ile	Leu
65				70						75					80
Leu	Thr	Val	Gly	Ser	Asp	Ser	His	Leu	Ser	Leu	Pro	Met	Tyr	His	Phe
				85					90					95	
Leu	Gly	His	Leu	Ser	Phe	Leu	Asp	Ala	Cys	Leu	Ser	Thr	Val	Thr	Val
			100					105					110		
Pro	Lys	Val	Met	Ala	Gly	Leu	Leu	Thr	Leu	Asp	Gly	Lys	Val	Ile	Ser
		115					120					125			
Phe	Glu	Gly	Cys	Ala	Val	Gln	Leu	Tyr	Cys	Phe	His	Phe	Leu	Ala	Ser
	130					135					140				
Thr	Glu	Cys	Phe	Leu	Tyr	Thr	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Leu	Ala
145					150					155					160
Ile	Cys	Gln	Pro	Leu	His	Tyr	Pro	Val	Ala	Met	Asn	Arg	Arg	Met	Cys
				165					170					175	
Ala	Glu	Met	Ala	Gly	Ile	Thr	Trp	Ala	Ile	Gly	Ala	Thr	His	Ala	Ala
			180					185					190		
Ile	His	Thr	Ser	Leu	Thr	Phe	Arg	Leu	Leu	Tyr	Cys	Gly	Pro	Cys	His
		195					200					205			
Ile	Ala	Tyr	Phe	Phe	Cys	Asp	Ile	Pro	Pro	Val	Leu	Lys	Leu	Ala	Cys
	210					215					220				
Thr	Asp	Thr	Thr	Ile	Asn	Glu	Leu	Val	Met	Leu	Ala	Ser	Ile	Gly	Ile
225					230					235					240
Val	Ala	Ala	Gly	Cys	Leu	Ile	Leu	Ile	Val	Ile	Ser	Tyr	Ile	Phe	Ile
				245					250					255	
Val	Ala	Ala	Val	Leu	Arg	Ile	Arg	Thr	Ala	Gln	Gly	Arg	Gln	Arg	Ala
			260					265					270		
Phe	Ser	Pro	Cys	Thr	Ala	Gln	Leu	Thr	Gly	Val	Leu	Leu	Tyr	Tyr	Val
		275					280					285			
Pro	Pro	Val	Cys	Ile	Tyr	Leu	Gln	Pro	Arg	Ser	Ser	Glu	Ala	Gly	Ala
	290					295					300				
Gly	Ala	Pro	Ala	Val	Phe	Tyr	Thr	Ile	Val	Thr	Pro	Met	Leu	Asn	Pro
305					310					315					320
Phe	Ile	Tyr	Thr	Leu	Arg	Asn	Lys	Glu	Val	Lys	His	Ala	Leu	Gln	Arg
				325					330					335	
Leu	Leu	Cys	Ser	Ser	Phe	Arg	Glu	Ser	Thr	Ala	Gly	Ser	Pro	Pro	Pro
			340					345					350		

<211> 1059
<212> DNA
<213> Homo sapiens

<400> 442
atgacatctc aggaaaggga tacagctatt tattccatta atgtcagttt tgttgcaaag 60
gggatgacta gccgctctgt gtgtgagaag atgaccatga caacggagaa ccccaaccag 120
actgtggtga gccacttctt cctggagggt ttgaggtaga ccgctaaaca ttctagcctc 180
ttcttcctcc tcttcctcct catctacagc atcactgtgg ctgggaatct cctcatcctc 240
ctaactgtgg gctctgactc tcacctcagc ttacccatgt accacttcct ggggcacctc 300
tccttcctgg atgcctgttt gtctacagtg acagtgccca aggtcatggc aggcctgctg 360
actctggatg ggaaggtgat ctcccttgag ggctgtgccg tacagcttta ttgcttcac 420
tttctggcca gcactgagtg ctccctgtac acagtcattg cctatgaccg ctatctggct 480
atctgtcaac ccctgcacta cccagtggcc atgaacagaa ggatgtgtgc agaaatggct 540
ggaatcacct gggccatagg tgccacgcac gctgcaatcc acacctcct caccctccgc 600
ctgctctact gtgggccttg ccacattgcc taactcttct gcgacatacc cctgtccta 660
aagctcgcct gtacagacac caccattaat gagctagtca tgcttgccag cattggcatc 720
gtggctgcag gctgcctcat cctcatcggt atttcctaca tcttcatcgt ggcagctgtg 780
ttgcgcatcc gcacagccca gggccggcag cgggccttct cccctgcac tgcccagctc 840
actggggtgc tcctgtacta cgtgccacct gtctgtatct acctgcagcc tcgctccagt 900
gaggcaggag ctggggcccc tgctgtcttc tacacaatcg taactccaat gctcaaccga 960
ttcatttaca ctttgcgaa caaggaggtg aagcatgctc tgcaaaggct tttgtgcagc 1020
agcttccgag agtctacagc aggcagccca ccccatag 1059

<210> 443
<211> 314
<212> PRT
<213> Homo sapiens

<400> 443
Met Asp Gln Arg Asn Tyr Thr Arg Val Lys Glu Phe Thr Phe Leu Gly
1 5 10 15
Ile Thr Gln Ser Arg Glu Leu Ser Gln Val Leu Phe Thr Phe Leu Phe
20 25 30
Leu Val Tyr Met Thr Thr Leu Met Gly Asn Phe Leu Ile Met Val Thr
35 40 45
Val Thr Cys Glu Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Arg
50 55 60
Asn Leu Ser Ile Leu Asp Ile Cys Phe Ser Ser Ile Thr Ala Pro Lys
65 70 75 80
Val Leu Ile Asp Leu Leu Ser Glu Thr Lys Thr Ile Ser Phe Ser Gly
85 90 95
Cys Val Thr Gln Met Phe Phe Phe His Leu Leu Gly Gly Ala Asp Val
100 105 110
Phe Ser Leu Ser Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Ser Lys
115 120 125
Pro Leu His Tyr Met Thr Ile Met Ser Arg Gly Arg Cys Thr Gly Leu
130 135 140
Ile Val Gly Phe Leu Gly Gly Gly Leu Val His Ser Ile Ala Gln Ile
145 150 155 160

Ser Leu Leu Leu Pro Leu Pro Val Cys Gly Pro Asn Val Leu Asp Thr
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Val Leu Lys Leu Ala Cys Thr Asp Thr
 180 185 190
 Phe Thr Leu Glu Leu Leu Met Ile Ser Asn Asn Gly Leu Val Ser Trp
 195 200 205
 Phe Val Phe Phe Phe Leu Leu Ile Ser Tyr Thr Val Ile Leu Met Met
 210 215 220
 Leu Arg Ser His Thr Gly Glu Gly Arg Arg Lys Ala Ile Ser Thr Cys
 225 230 235 240
 Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr
 245 250 255
 Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Thr Asp Thr Ala Ile Ser
 260 265 270
 Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Ile Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Glu Met Lys Leu Ala Met Arg Lys Leu Lys Arg Arg
 290 295 300
 Leu Gly Gln Ser Glu Arg Ile Leu Ile Gln
 305 310

<210> 444
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 444
 atggatcaga gaaattacac cagagtgaaa gaattttacct tcttggaat tactcagtc 60
 cgagaactga gccaggtctt atttaccttc ctgttttttg tgtacatgac aactctaag 120
 ggaaacttcc tcatcatggt tacagttacc tgtgaatctc accttcatac gcccatgtac 180
 ttcttgctcc gcaacctgtc tattcttgac atctgctttt cctccatcac agctcctaag 240
 gtcctgatag atcttctatc agagacaaaa accatctcct tcagtggctg tgctactcaa 300
 atgttcttct tccaccttct ggggggagca gacgtttttt ctctctctgt gatggcgttt 360
 gaccgctata tagccatctc caagcccctg cactatatga ccatcatgag tagggggcga 420
 tgcacaggcc tcatcgtggg ctctctgggt ggggggcttg tccactccat agcgagatt 480
 tctctattgc tccactccc tgtctgtgga cccaatgttc ttgacacttt ctactgcgat 540
 gtccccagg tctcaaaact tgctgcact gacaccttca ctctggagct cctgatgatt 600
 tcaaataatg ggtagtcag ttggtttgta ttcttcttct tctcatatc ttacacggtc 660
 atcttgatga tgctgaggtc tcacactggg gaaggcagga ggaaagccat ctccacctgc 720
 acctcccaca tcaccgtggg gaccctgcat ttcgtgccct gcacttatgt ctatgcccg 780
 ccttccactg cctccccac agacactgcc atctctgtca ccttccactgt catctccct 840
 ttgctcaatc ctataattta cacgctgagg aatcaggaaa tgaagttggc catgaggaaa 900
 ctgaagagac ggctaggaca atcagaaagg attttaattc aataa 945

<210> 445
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 445

Met	Ala	Pro	Glu	Asn	Phe	Thr	Arg	Val	Thr	Glu	Phe	Ile	Leu	Thr	Gly	1	5	10	15
Val	Ser	Ser	Cys	Pro	Glu	Leu	Gln	Ile	Pro	Leu	Phe	Leu	Val	Phe	Leu	20	25	30	
Val	Leu	Tyr	Val	Leu	Thr	Met	Ala	Gly	Asn	Leu	Gly	Ile	Ile	Thr	Leu	35	40	45	
Thr	Ser	Val	Asp	Ser	Arg	Leu	Gln	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Arg	50	55	60	
His	Leu	Ala	Ile	Ile	Asn	Leu	Gly	Asn	Ser	Thr	Val	Ile	Ala	Pro	Lys	65	70	75	80
Met	Leu	Met	Asn	Phe	Leu	Val	Lys	Lys	Lys	Thr	Thr	Ser	Phe	Tyr	Glu	85	90	95	
Cys	Ala	Thr	Gln	Leu	Gly	Gly	Phe	Leu	Phe	Phe	Ile	Val	Ser	Glu	Val	100	105	110	
Met	Met	Leu	Ala	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	115	120	125	
Pro	Leu	Leu	Tyr	Met	Val	Val	Val	Ser	Arg	Arg	Leu	Cys	Leu	Leu	Leu	130	135	140	
Val	Ser	Leu	Thr	Tyr	Leu	Tyr	Gly	Phe	Ser	Thr	Ala	Ile	Val	Val	Ser	145	150	155	160
Pro	Cys	Ile	Phe	Ser	Val	Ser	Tyr	Cys	Ser	Ser	Asn	Ile	Ile	Asn	His	165	170	175	
Phe	Tyr	Cys	Asp	Ile	Ala	Pro	Leu	Leu	Ala	Leu	Ser	Cys	Ser	Asp	Thr	180	185	190	
Tyr	Ile	Pro	Glu	Thr	Ile	Val	Phe	Ile	Ser	Ala	Ala	Thr	Asn	Leu	Phe	195	200	205	
Phe	Ser	Met	Ile	Thr	Val	Leu	Val	Ser	Tyr	Phe	Asn	Ile	Val	Leu	Ser	210	215	220	
Ile	Leu	Arg	Ile	Arg	Ser	Pro	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Ser	Thr	225	230	235	240
Cys	Ala	Ser	His	Met	Ile	Ala	Val	Thr	Val	Phe	Tyr	Gly	Thr	Met	Leu	245	250	255	
Phe	Met	Tyr	Leu	Gln	Pro	Gln	Thr	Asn	His	Ser	Leu	Asp	Thr	Asp	Lys	260	265	270	
Met	Ala	Ser	Val	Phe	Tyr	Thr	Leu	Val	Ile	Pro	Met	Leu	Asn	Pro	Leu	275	280	285	
Ile	Tyr	Ser	Leu	Arg	Asn	Asn	Asp	Val	Asn	Val	Ala	Leu	Lys	Lys	Phe	290	295	300	
Met	Glu	Asn	Pro	Cys	Tyr	Ser	Phe	Lys	Ser	Met	305	310	315						

<210> 446
<211> 948
<212> DNA
<213> Homo sapiens

<400> 446
atggctcctg aaaaatttcac caggggtcact gagtttattc tcacaggtgt ctctagctgt 60
ccagagctcc agattcccct ctctctgggc ttcttagtgc tctatgtgct gaccatggca 120
gggaacctgg gcatcatcac cctcaccagt gttgactctc gacttcaaac ccccatgtac 180
tttttctga gacatctagc tatcatcaat cttggcaact ctactgtcat tgcccctaaa 240
atgctgatga acttttttagt aaagaagaaa actacctcat tctatgaatg tgccacccaa 300
ctgggagggt tcttggtctt tattgtatcg gaggtaatga tgctggctgt gatggcctat 360
gaccgctatg tggccatttg taacctctg ctctacatgg tgggtggtgc tcggcggctc 420
tgctcctgc tgggtgctcc caggtacctc tatggctttt ctacagctat tgtggtttca 480
ccttgatat tctctgtgct ttattgctct tctaataata tcaatcattt ttactgtgat 540
attgcacctc tgtagcatt atcttgctct gatacttaca taccagaaac aatagtcttt 600
atatctgcag caacaaattt gtttttttcc atgattacag ttctagtatc ttatttcaat 660
attgttttgt ccattctaag gatacgttca ccagaaggaa ggaaaaaagc cttttccacc 720
tgcgcttcgc atatgatagc agtcacggtt ttctatggga caatgctatt tatgtatttg 780
cagcccaaaa ccaaccactc actggatact gataagatgg cttctgtggt ttacacattg 840
gtgattccta tgctgaatcc cttgatctac agcctgagga ataatgatgt aaatgttgcc 900
ttaaagaaat tcatggaaaa tccatgttac tcctttaaat caatgtaa 948

<210> 447
<211> 310
<212> PRT
<213> Homo sapiens

<400> 447
Met Asp Pro Gln Asn Tyr Ser Leu Val Ser Glu Phe Val Leu His Gly
1 5 10 15
Leu Cys Thr Ser Arg His Leu Gln Asn Phe Phe Phe Ile Phe Phe Phe
20 25 30
Gly Val Tyr Val Ala Ile Met Leu Gly Asn Leu Leu Ile Leu Val Thr
35 40 45
Val Ile Ser Asp Pro Cys Leu His Ser Ser Pro Met Tyr Phe Leu Leu
50 55 60
Gly Asn Leu Ala Phe Leu Asp Met Trp Leu Ala Ser Phe Ala Thr Pro
65 70 75 80
Lys Met Ile Arg Asp Phe Leu Ser Asp Gln Lys Leu Ile Ser Phe Gly
85 90 95
Gly Cys Met Ala Gln Ile Phe Phe Leu His Phe Thr Gly Gly Ala Glu
100 105 110
Met Val Leu Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
115 120 125
Lys Pro Leu His Tyr Met Thr Leu Met Ser Trp Gln Thr Cys Ile Arg
130 135 140
Leu Val Leu Ala Ser Trp Val Val Gly Phe Val His Ser Ile Ser Gln
145 150 155 160
Val Ala Phe Thr Val Asn Leu Pro Tyr Cys Gly Pro Asn Glu Val Asp

165	170	175
Ser Phe Phe Cys Asp Leu Pro Leu Val Ile Lys Leu Ala Cys Met Asp		
180	185	190
Thr Tyr Val Leu Gly Ile Ile Met Ile Ser Asp Ser Gly Leu Leu Ser		
195	200	205
Leu Ser Cys Phe Leu Leu Leu Leu Ile Ser Tyr Thr Val Ile Leu Leu		
210	215	220
Ala Ile Arg Gln Arg Ala Ala Gly Ser Thr Ser Lys Ala Leu Ser Thr		
225	230	235
Cys Ser Ala His Ile Met Val Val Thr Leu Phe Phe Gly Pro Cys Ile		
245	250	255
Phe Val Tyr Val Arg Pro Phe Ser Arg Phe Ser Val Asp Lys Leu Leu		
260	265	270
Ser Val Phe Tyr Thr Ile Phe Thr Pro Leu Leu Asn Pro Ile Ile Tyr		
275	280	285
Thr Leu Arg Asn Glu Glu Met Lys Ala Ala Met Lys Lys Leu Gln Asn		
290	295	300
Arg Arg Val Thr Phe Gln		
305	310	

<210> 448
 <211> 933
 <212> DNA
 <213> Homo sapiens

<400> 448

atggaccac	agaactattc	cttgggtgtca	gaatttgtgt	tgcattggact	ctgcacttca	60
cgacatcttc	aaaatttttt	ctttatatatt	ttctttgggg	tctatgtggc	cattatgctg	120
ggtaaccttc	tcatttttgg	cactgtaatt	tctgatccct	gcctgcactc	ctcccctatg	180
tacttctctg	tggggaacct	agctttcctg	gacatgtggc	tggcctcatt	tgccactccc	240
aagatgatca	gggatttcct	tagtgatcaa	aaactcatct	cctttggagg	atgtatggct	300
caaactttct	tcttgcactt	tactgggtgg	gctgagatgg	tgctcctggg	ttccatggcc	360
tatgacagat	atgtggccat	atgcaaacc	ttgcattaca	tgactttgat	gagttggcag	420
acttgcac	ggctgggtgt	ggcttcatgg	gtcgttggat	ttgtgcactc	catcagtc	480
gtggctttca	ctgtaaattt	gccttactgt	ggccccaatg	aggtagacag	cttcttctgt	540
gacctccctc	tggtgatcaa	acttgcctgc	atggacacct	atgtcttggg	tataaattatg	600
atctcagaca	gtgggttgt	ttccttgagc	tgttttctgc	tcctcctgat	ctcctacacc	660
gtgatcctcc	tcgctatcag	acagcgtgct	gccggtagca	catccaaagc	actctccact	720
tgctctgcac	atatcatgg	agtgacgctg	ttctttggcc	cttgcathtt	tgtttatgtg	780
cggcctttca	gtaggttctc	tgtggacaag	ctgctgtctg	tgttttatac	catttttact	840
ccactcctga	acccattat	ctacacattg	agaaatgagg	agatgaaagc	agctatgaag	900
aaactgcaaa	accgacgggt	gacttttcaa	tga			933

<210> 449
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 449
 Met Ala Gly Glu Asn His Thr Thr Leu Pro Glu Phe Leu Leu Leu Gly

1	5	10	15
Phe Ser Asp Leu Lys Ala Leu Gln Gly Pro Leu Phe Trp Val Val Leu	20	25	30
Leu Val Tyr Leu Val Thr Leu Leu Gly Asn Ser Leu Ile Ile Leu Leu	35	40	45
Thr Gln Val Ser Pro Ala Leu His Ser Pro Met Tyr Phe Phe Leu Arg	50	55	60
Gln Leu Ser Val Val Glu Leu Phe Tyr Thr Thr Asp Ile Val Pro Arg	65	70	80
Thr Leu Ala Asn Leu Gly Ser Pro His Pro Gln Ala Ile Ser Phe Gln	85	90	95
Gly Cys Ala Ala Gln Met Tyr Val Phe Ile Val Leu Gly Ile Ser Glu	100	105	110
Cys Cys Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys	115	120	125
Gln Pro Leu Arg Tyr Ser Thr Leu Leu Ser Pro Arg Ala Cys Leu Ala	130	135	140
Met Val Gly Ser Ser Trp Leu Thr Gly Ile Ile Thr Ala Thr Thr His	145	150	160
Ala Ser Leu Ile Phe Ser Leu Pro Phe Arg Ser His Pro Ile Ile Pro	165	170	175
His Phe Leu Cys Asp Ile Leu Pro Val Leu Arg Leu Ala Ser Ala Gly	180	185	190
Lys His Arg Ser Glu Ile Ser Val Met Thr Ala Thr Ile Val Phe Ile	195	200	205
Met Ile Pro Phe Ser Leu Ile Val Thr Ser Tyr Ile Arg Ile Leu Gly	210	215	220
Ala Ile Leu Ala Met Ala Ser Thr Gln Ser Arg Arg Lys Val Phe Ser	225	230	240
Thr Cys Ser Ser His Leu Leu Val Val Ser Leu Phe Phe Gly Thr Ala	245	250	255
Ser Ile Thr Tyr Ile Arg Pro Gln Ala Gly Ser Ser Val Thr Thr Asp	260	265	270
Arg Val Leu Ser Leu Phe Tyr Thr Val Ile Thr Pro Met Leu Asn Pro	275	280	285
Ile Ile Tyr Thr Leu Arg Asn Lys Asp Val Arg Arg Ala Leu Arg His	290	295	300
Leu Val Lys Arg Gln Arg Pro Ser Pro	305	310	

<210> 450

<211> 942
<212> DNA
<213> Homo sapiens

<400> 450
atggctgggg aaaaccatac tacactgcct gaattcctcc ttctgggatt ctctgacctc 60
aaggccctgc agggccccct gttctgggtg gtgcttctgg tctacctggt cacccttgctg 120
ggtaactccc tgatcatcct cctcacacag gtcagccctg ccctgcactc ccccatgtac 180
ttcttctctgc gccaaactctc agtggtggag ctcttctaca ccactgacat cgtgcccagg 240
accctggcca atctgggctc cccgcatccc caggccatct ctttccaggg ctgtgcagcc 300
cagatgtacg tcttcattgt cctgggcata tcggagtgtc gcctgctcac ggccatggcc 360
tatgaccgat atgttgccat ctgccagccc ctaagctatt ccaccctctt gagcccacgg 420
gcctgcttgg ccatgggtggg gtccctcctgg ctacacaggca tcatcacggc caccacccat 480
gcctccctca tcttctctct accttttctgc agccaccgca tcatcccgca ctttctctgt 540
gacatcctgc cagtactgag gctgggaagt gctgggaagc acaggagcga gatctccgtg 600
atgacagcca ccatagtctt cattatgata cccttctctc tgattgtcac ctcttacatc 660
cgcatacctgg gtgccatcct agcaatggcc tccaccacaga gccgccgcaa ggtcttctcc 720
acctgctcct cccatctgct cgtgggtctct ctcttctttg gaacagccag catcacctac 780
atccggccgc aggcaggctc ctctgttacc acagaccgcg tcctcagtct cttctacaca 840
gtcatcacac ccatgctcaa ccccatcatc tacacccttc ggaacaagga cgtgaggagg 900
gccctgcgac acttggtgaa gaggcagcgc ccctcaccct ga 942

<210> 451
<211> 335
<212> PRT
<213> Homo sapiens

<400> 451
Met Pro Gln Ile Leu Ile Phe Thr Tyr Leu Asn Met Phe Tyr Phe Phe
1 5 10 15
Pro Pro Leu Gln Ile Leu Ala Glu Asn Leu Thr Met Val Thr Glu Phe
20 25 30
Leu Leu Leu Gly Phe Ser Ser Leu Gly Glu Ile Gln Leu Ala Leu Phe
35 40 45
Val Val Phe Leu Phe Leu Tyr Leu Val Ile Leu Ser Gly Asn Val Thr
50 55 60
Ile Ile Ser Val Ile His Leu Asp Lys Ser Leu His Thr Pro Met Tyr
65 70 75 80
Phe Phe Leu Gly Ile Leu Ser Thr Ser Glu Thr Phe Tyr Thr Phe Val
85 90 95
Ile Leu Pro Lys Met Leu Ile Asn Leu Leu Ser Val Ala Arg Thr Ile
100 105 110
Ser Phe Asn Cys Cys Ala Leu Gln Met Phe Phe Phe Leu Gly Phe Ala
115 120 125
Ile Thr Asn Cys Leu Leu Leu Gly Val Met Gly Tyr Asp Arg Tyr Ala
130 135 140
Ala Ile Cys His Pro Leu His Tyr Pro Thr Leu Met Ser Trp Gln Val
145 150 155 160
Cys Gly Lys Leu Ala Ala Ala Cys Ala Ile Gly Gly Phe Leu Ala Ser
165 170 175

Leu Thr Val Val Asn Leu Val Phe Ser Leu Pro Phe Cys Ser Ala Asn
 180 185 190
 Lys Val Asn His Tyr Phe Cys Asp Ile Ser Ala Val Ile Leu Leu Ala
 195 200 205
 Cys Thr Asn Thr Asp Val Asn Glu Phe Val Ile Phe Ile Cys Gly Val
 210 215 220
 Leu Val Leu Val Val Pro Phe Leu Phe Ile Cys Val Ser Tyr Leu Cys
 225 230 235 240
 Ile Leu Arg Thr Ile Leu Lys Ile Pro Ser Ala Glu Gly Arg Arg Lys
 245 250 255
 Ala Phe Ser Thr Cys Ala Ser His Leu Ser Val Val Ile Val His Tyr
 260 265 270
 Gly Cys Ala Ser Phe Ile Tyr Leu Arg Pro Thr Ala Asn Tyr Val Ser
 275 280 285
 Asn Lys Asp Arg Leu Val Thr Val Thr Tyr Thr Ile Val Thr Pro Leu
 290 295 300
 Leu Asn Pro Met Val Tyr Ser Leu Arg Asn Lys Asp Val Gln Leu Ala
 305 310 315 320
 Ile Arg Lys Val Leu Gly Lys Lys Gly Ser Leu Lys Leu Tyr Asn
 325 330 335

<210> 452
 <211> 1008
 <212> DNA
 <213> Homo sapiens

<400> 452
 atgccccaaa ttcttatatt cacatacctg aatatgtttt acttctttcc ccctttgcag 60
 atcttggcag aaaacctcac catggtcacc gaattcctgt tgctggggtt ttccagcctt 120
 ggtgaaattc agctggccct cttttagtatt tttctttttc tgtatctagt cattcttagt 180
 ggcaatgtca ccattatcag tgtcatccac ctggataaaa gcctccacac accaatgtac 240
 ttcttccttg gcattctctc aacatctgag accttctaca cttttgtcat tctacccaag 300
 atgctcatca atctactttc tgtggccagg acaatctcct tcaactgttg tgctcttcaa 360
 atgttcttct tccttggttt tgccattacc aactgcctgc tattgggtgt gatgggttat 420
 gatcgctatg ctgccatttg tcaccctctg cattacccca ctcttatgag ctggcagggtg 480
 tgtggaaaac tggcagctgc ctgtgcaatt ggtggcttct tggcctctct tacagtagta 540
 aatttagttt tcagcctccc tttttgtagc gccaacaaag tcaatcatta cttctgtgac 600
 atctcagcag tcattcttct ggcttgtagc aacacagatg ttaacgaatt tgtgatattc 660
 atttgtggag ttcttgtagt tgtgggtccc tttctgttta tctgtgttct ttatctctgc 720
 attctgagga ctatcctgaa gattccctca gctgagggca gacggaaagc gttttccacc 780
 tgcgcctctc acctcagtgt tgttattggt cattatggct gtgcttctct catctacctg 840
 aggctacag caaactatgt gtccaacaaa gacaggctgg tgacgggtgac atacacgatt 900
 gtcactccat tactaaacct catggtttat agcctcagaa acaaggatgt ccaacttgct 960
 atcagaaaag tgttggggcaa gaaagggttct ctaaaactat ataattga 1008

<210> 453
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 453

Met Asn Thr Thr Leu Phe His Pro Tyr Ser Phe Leu Leu Leu Gly Ile
1 5 10 15

Pro Gly Leu Glu Ser Met His Leu Trp Val Gly Phe Pro Phe Phe Ala
20 25 30

Val Phe Leu Thr Ala Val Leu Gly Asn Ile Thr Ile Leu Phe Val Ile
35 40 45

Gln Thr Asp Ser Ser Leu His His Pro Met Phe Tyr Phe Leu Ala Ile
50 55 60

Leu Ser Ser Ile Asp Pro Gly Leu Ser Thr Ser Thr Ile Pro Lys Met
65 70 75 80

Leu Gly Thr Phe Trp Phe Thr Leu Arg Glu Ile Ser Phe Glu Gly Cys
85 90 95

Leu Thr Gln Met Phe Phe Ile His Leu Cys Thr Gly Met Glu Ser Ala
100 105 110

Val Leu Val Ala Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys Asp Pro
115 120 125

Leu Cys Tyr Thr Leu Val Leu Thr Asn Lys Val Val Ser Val Met Ala
130 135 140

Leu Ala Ile Phe Leu Arg Pro Leu Val Phe Val Ile Pro Phe Val Leu
145 150 155 160

Phe Ile Leu Arg Leu Pro Phe Cys Gly His Gln Ile Ile Pro His Thr
165 170 175

Tyr Gly Glu His Met Gly Ile Ala Arg Leu Ser Cys Ala Ser Ile Arg
180 185 190

Val Asn Ile Ile Tyr Gly Leu Cys Ala Ile Ser Ile Leu Val Phe Asp
195 200 205

Ile Ile Ala Ile Val Ile Ser Tyr Val Gln Ile Leu Cys Ala Val Phe
210 215 220

Leu Leu Ser Ser His Asp Ala Arg Leu Lys Ala Phe Ser Thr Cys Gly
225 230 235 240

Ser His Val Cys Val Met Leu Thr Phe Tyr Met Pro Ala Phe Phe Ser
245 250 255

Phe Met Thr His Arg Phe Gly Arg Asn Ile Pro His Phe Ile His Ile
260 265 270

Leu Leu Ala Asn Phe Tyr Val Val Ile Pro Pro Ala Leu Asn Ser Val
275 280 285

Ile Tyr Gly Val Arg Thr Lys Gln Ile Arg Ala Gln Val Leu Lys Met
290 295 300

Phe Phe Asn Lys
305

<210> 454
<211> 927
<212> DNA
<213> Homo sapiens

<400> 454
atgaataacca ctctatatttca tccttactct ttcctttcttc tgggaattcc tgggctggaa 60
agtatgcac tctgggttgg ttttcctttc tttgctgtgt tcctgacagc tgtccttggg 120
aatacacca tcctttttgt gattcagact gacagtagtc tccatcatcc catgttctac 180
ttcctggcca ttctgtcatc tattgaccgg ggctgtctca catccacat ccctaaaatg 240
cttggcacct tctggtttac cctgagagaa atctcctttg aaggatgcct taccagatg 300
ttcttcatcc acctgtgcac tggcatggaa tcagctgtgc ttgtggccat ggctatgat 360
tgctatgtgg ccatctgtga ccctccttgc tacacgttgg tgctgacaaa caagggtgtg 420
tcagttatgg cactggccat ctttctgaga cccttagtct ttgtcatacc ctttgttcta 480
tttatcctaa ggcttccatt ttgtggacac caaattattc ctcatactta tggtgagcac 540
atgggcatgt cccgcctgtc ttgtgccagc atcagggtta acatcatcta tggcttatgt 600
gccatctcta tcctgggtctt tgacatcata gcaattgtca tttcctatgt acagatcctt 660
tgtgtgttat ttctactctc ttcacatgat gcacgactca aggcattcag cacctgtggc 720
tctcatgtgt gtgtcatgtt gactttctat atgcctgcat ttttctcatt catgacccat 780
aggtttggtc ggaatatacc tcactttatc cacattcttc tggctaattt ctatgtagtc 840
attccacctg ctctcaactc tgtaatttat ggtgtcagaa ccaaacagat tagagcacia 900
gtgctgaaaa tgtttttcaa taaataa 927

<210> 455
<211> 313
<212> PRT
<213> Homo sapiens

<400> 455
Met Glu Gln Val Asn Lys Thr Val Val Arg Glu Phe Val Val Leu Gly
1 5 10 15
Phe Ser Ser Leu Ala Arg Leu Gln Gln Leu Leu Phe Val Ile Phe Leu
20 25 30
Leu Leu Tyr Leu Phe Thr Leu Gly Thr Asn Ala Ile Ile Ile Ser Thr
35 40 45
Ile Val Leu Asp Arg Ala Leu His Thr Pro Met Tyr Phe Phe Leu Ala
50 55 60
Ile Leu Ser Cys Ser Glu Ile Cys Tyr Thr Phe Val Ile Val Pro Lys
65 70 75 80
Met Leu Val Asp Leu Leu Ser Gln Lys Lys Thr Ile Ser Phe Leu Gly
85 90 95
Cys Ala Ile Gln Met Phe Ser Phe Leu Phe Phe Gly Ser Ser His Ser
100 105 110
Phe Leu Leu Ala Ala Met Gly Tyr Asp Arg Tyr Met Ala Ile Cys Asn
115 120 125
Pro Leu Arg Tyr Ser Val Leu Met Gly His Gly Val Cys Met Gly Leu
130 135 140
Met Ala Ala Ala Cys Ala Cys Gly Phe Thr Val Ser Leu Val Thr Thr
145 150 155 160

Ser Leu Val Phe His Leu Pro Phe His Ser Ser Asn Gln Leu His His
 165 170 175
 Phe Phe Cys Asp Ile Ser Pro Val Leu Lys Leu Ala Ser Gln His Ser
 180 185 190
 Gly Phe Ser Gln Leu Val Ile Phe Met Leu Gly Val Phe Ala Leu Val
 195 200 205
 Ile Pro Leu Leu Leu Ile Leu Val Ser Tyr Ile Arg Ile Ile Ser Ala
 210 215 220
 Ile Leu Lys Ile Pro Ser Ser Val Gly Arg Tyr Lys Thr Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Ile Val Val Thr Val His Tyr Ser Cys Ala Ser
 245 250 255
 Phe Ile Tyr Leu Arg Pro Lys Thr Asn Tyr Thr Ser Ser Gln Asp Thr
 260 265 270
 Leu Ile Ser Val Ser Tyr Thr Ile Leu Thr Pro Leu Phe Asn Pro Met
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Phe Lys Ser Ala Leu Arg Arg Thr
 290 295 300
 Ile Gly Gln Thr Phe Tyr Pro Leu Ser
 305 310

<210> 456
 <211> 942
 <212> DNA
 <213> Homo sapiens

<400> 456
 atggagcaag tcaataagac tgtggtgaga gagttcgtcg tctcgggctt ctcacccctg 60
 gccaggctgc agcagctgct ctttggtatc ttcctgctcc tctacctggt cactctgggc 120
 accaatgcaa tcatcatttc caccattgtg ctggacagag cccttcatac tcccatgtac 180
 ttcttccttg ccataccttc ttgctctgag atttgctata cctttgtcat tgtacccaag 240
 atgctgggtg acctgctgtc ccagaagaag accatttctt tcctgggctg tgccatccaa 300
 atgttttctt tctcttctt tggctcctct cactccttcc tgctggcagc catgggctat 360
 gatcgctata tggccatctg taacccactg cgctactcag tgctcatggg acatgggggtg 420
 tgtatgggac taatggctgc tgcctgtgcc tgtggcttca ctgtctcctt gggtcaccacc 480
 tccctagtat ttcatctgcc cttccactcc tccaaccagc tccatcactt cttctgtgac 540
 atctcccctg tccttaaact ggcattctcag cactccggct tcagtcagct ggtcatattc 600
 atgcttggtg tatttgctt ggtcattcct ctgctactta tctagtctc ctacatccgc 660
 atcatctctg ccattctaaa aatcccttcc tccggttgaa gatacaagac cttctccacc 720
 tgtgcctccc atctcattgt ggtaactgtt cactacagtt gtgcctcttt catctactta 780
 aggcccaaga ctaattacac ttcaagccaa gacaccctaa tatctgtgtc atacaccatc 840
 cttaccccat tgttcaatcc aatgatttat agtctgagaa ataaggaatt caaatcagcc 900
 ctacgaagaa caatcggcca aactttctat cctcttagtt aa 942

<210> 457
 <211> 369
 <212> PRT
 <213> Homo sapiens

<400> 457

Met	Trp	Gln	Glu	Tyr	Tyr	Phe	Leu	Asn	Val	Phe	Phe	Pro	Leu	Leu	Lys
1				5					10					15	
Val	Cys	Cys	Leu	Thr	Ile	Asn	Ser	His	Val	Val	Ile	Leu	Leu	Pro	Trp
			20					25					30		
Glu	Cys	Tyr	His	Leu	Ile	Trp	Lys	Ile	Leu	Pro	Tyr	Ile	Gly	Thr	Thr
		35					40					45			
Val	Gly	Ser	Met	Glu	Glu	Tyr	Asn	Thr	Ser	Ser	Thr	Asp	Phe	Thr	Phe
	50					55					60				
Met	Gly	Leu	Phe	Asn	Arg	Lys	Glu	Thr	Ser	Gly	Leu	Ile	Phe	Ala	Ile
65					70					75					80
Ile	Ser	Ile	Ile	Phe	Phe	Thr	Ala	Leu	Met	Ala	Asn	Gly	Val	Met	Ile
				85					90					95	
Phe	Leu	Ile	Gln	Thr	Asp	Leu	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu
			100					105					110		
Leu	Ser	His	Leu	Ser	Leu	Ile	Asp	Met	Met	Tyr	Ile	Ser	Thr	Ile	Val
		115					120					125			
Pro	Lys	Met	Leu	Val	Asn	Tyr	Leu	Leu	Asp	Gln	Arg	Thr	Ile	Ser	Phe
	130					135					140				
Val	Gly	Cys	Thr	Ala	Gln	His	Phe	Leu	Tyr	Leu	Thr	Leu	Val	Gly	Ala
145					150					155					160
Glu	Phe	Phe	Leu	Leu	Gly	Leu	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile
			165						170					175	
Cys	Asn	Pro	Leu	Arg	Tyr	Pro	Val	Leu	Met	Ser	Arg	Arg	Val	Cys	Trp
			180					185					190		
Met	Ile	Ile	Ala	Gly	Ser	Trp	Phe	Gly	Gly	Ser	Leu	Asp	Gly	Phe	Leu
	195						200					205			
Leu	Thr	Pro	Ile	Thr	Met	Ser	Phe	Pro	Phe	Cys	Asn	Ser	Arg	Glu	Ile
	210					215						220			
Asn	His	Phe	Phe	Cys	Glu	Ala	Pro	Ala	Val	Leu	Lys	Leu	Ala	Cys	Ala
225					230					235					240
Asp	Thr	Ala	Leu	Tyr	Glu	Thr	Val	Met	Tyr	Val	Cys	Cys	Val	Leu	Met
			245						250					255	
Leu	Leu	Ile	Pro	Phe	Ser	Val	Val	Leu	Ala	Ser	Tyr	Ala	Arg	Ile	Leu
			260					265					270		
Thr	Thr	Val	Gln	Cys	Met	Ser	Ser	Val	Glu	Gly	Arg	Lys	Lys	Ala	Phe
		275					280					285			
Ala	Thr	Cys	Ser	Ser	His	Met	Thr	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ala
	290					295					300				
Ala	Met	Tyr	Thr	Tyr	Met	Leu	Pro	His	Ser	Tyr	His	Lys	Pro	Ala	Gln
305					310					315					320

Asp Lys Val Leu Ser Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn
 325 330 335

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Lys
 340 345 350

Arg Ala Leu Gly Arg Phe Lys Gly Pro Gln Arg Val Ser Gly Gly Val
 355 360 365

Phe

<210> 458
 <211> 1110
 <212> DNA
 <213> Homo sapiens

<400> 458
 atgtggcaag aataactatatt tttaaatggt ttcttccac ttttaaaagt ttgctgccta 60
 acaattaatt cacatgttgt tattttactg ccctgggaat gctatcatct tatttggaag 120
 atattacctt atacggcac aactgtagga tcaatggaag agtacaacac atcctctaca 180
 gacttcactt tcatggggct gttcaacaga aaggaaacct caggtcttat ttttgccatc 240
 atctctatca tcttcttcac cgactgatg gccaatgggg ttatgatctt cctgatccaa 300
 acagatttgc gccttcatac acccatgtac ttctctctca gccaccttct ctttaattgac 360
 atgatgtata tttccactat tgtgcctaag atgctgggta attacctgct ggatcaaagg 420
 accatttcct ttgtgggggtg cacagctcaa cacttctctt accttaccct tgtgggagct 480
 gaattcttcc tgctgggctt catggcctat gaccgctatg tggccatttg caaccctctg 540
 agataccctg tcctcatgag ccgcggggtc tgttggatga ttatagcagg ttctctgggtt 600
 gggggctctt tggatggctt cctcctaacc cccatcacca tgagcttctc cttctgcaat 660
 tcccgggaga ttaaccactt cttctgtgag gcaccagcag tcctgaagtt ggcagtgtga 720
 gacacagccc tctacgagac agtgatgtat gtgtgctgtg ttttgatgct gctgattcct 780
 ttctctgtag tccttgcttc ctatgccoga atcctgacta cagttcagtg catgagctca 840
 gtggagggca ggaagaaggc atttgccact tgctcatccc acatgactgt ggtgtccttg 900
 ttctacgggg ctgccatgta cacctacatg ctgccacatt cttaccacaa gccagcccag 960
 gacaaagtcc tctctgtgtt ttacaccatt ctcacacca tgctgaacct cctcatctac 1020
 agccttagaa acaaggatgt gactggagct ctgaagaggg ccttggggag gttcaagggt 1080
 cctcaaaggg tgtcaggagg tgtcttttga 1110

<210> 459
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 459
 Met Asp Leu Lys Asn Gly Ser Leu Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Phe Gly Arg Trp Glu Leu Gln Ile Phe Phe Phe Val Thr Phe Ser
 20 25 30
 Leu Ile Tyr Gly Ala Thr Val Met Gly Asn Ile Leu Ile Met Val Thr
 35 40 45
 Val Thr Cys Arg Ser Thr Leu His Ser Pro Leu Tyr Phe Leu Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Met Cys Leu Ser Thr Ala Thr Thr Pro Lys
 65 70 75 80

Met Ile Ile Asp Leu Leu Thr Asp His Lys Thr Ile Ser Val Trp Gly
85 90 95

Cys Val Thr Gln Met Phe Phe Met His Phe Phe Gly Gly Ala Glu Met
100 105 110

Thr Leu Leu Ile Ile Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
115 120 125

Pro Leu His Tyr Arg Thr Ile Met Ser His Lys Leu Leu Lys Gly Phe
130 135 140

Ala Ile Leu Ser Trp Ile Ile Gly Phe Leu His Ser Ile Ser Gln Ile
145 150 155 160

Val Leu Thr Met Asn Leu Pro Phe Cys Gly His Asn Val Ile Asn Asn
165 170 175

Ile Phe Cys Asp Leu Pro Leu Val Ile Lys Leu Ala Cys Ile Glu Thr
180 185 190

Tyr Thr Leu Glu Leu Phe Val Ile Ala Asp Ser Gly Leu Leu Ser Phe
195 200 205

Thr Cys Phe Ile Leu Leu Leu Val Ser Tyr Ile Val Ile Leu Val Ser
210 215 220

Val Pro Lys Lys Ser Ser His Gly Leu Ser Lys Ala Leu Ser Thr Leu
225 230 235 240

Ser Ala His Ile Ile Val Val Thr Leu Phe Phe Gly Pro Cys Ile Phe
245 250 255

Ile Tyr Val Trp Pro Phe Ser Ser Leu Ala Ser Asn Lys Thr Leu Ala
260 265 270

Val Phe Tyr Thr Val Ile Thr Pro Leu Leu Asn Pro Ser Ile Tyr Thr
275 280 285

Leu Arg Asn Lys Lys Met Gln Glu Ala Ile Arg Lys Leu Arg Phe Gln
290 295 300

Tyr Val Ser Ser Ala Gln Asn Phe
305 310

<210> 460

<211> 939

<212> DNA

<213> Homo sapiens

<400> 460

atggatctta aaaatggatc tctagtgacc gagtttattt tactaggatt ttttggacga 60
tggaacttc aaattttctt ctttgtgaca ttttccctga tctacggtgc tactgtgatg 120
ggaaacattc tcattatggc cacagtgcac tgtagggtcaa cccttcattc tcccttgatc 180
tttctccttg gaaatctctc ttttttggac atgtgtctct ccaactgccac aacacccaag 240
atgatcatag atttgctcac tgaccacaag accatctctg tgtggggctg cgtgacccag 300
atgttcttca tgcacttctt tgggggtgct gagatgactc ttctgataat catggccttt 360
gacagggtatg tagccatattg taaacccctg cactatagga caatcatgag ccacaagctg 420
ctaaaggggt ttgcgatact ttcattggata attgggtttt tacactccat aagccagata 480
gttttaacaa tgaacttgcc tttctgtggc cacaatgtca taaacaacat attttgtgat 540

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cttcccccttg tgatcaagct tgcttgcatt gaaacataca ccctggaatt atttgtcatt 600
gctgacagcg ggctgctctc tttcacctgt ttcatectct tgcttgtttc ttacattgtc 660
atcctgggtca gtgtaccaaa aaaatcatca catgggctct ccaaggcgct gtccacattg 720
tctgcccaca tcattgtggt cactctgttc tttggacctt gtatttttat ctatgtttgg 780
ccattcagta gtttggcaag caataaaact cttgccgtat tttatacagt tatcacaccc 840
ttactgaatc cgagtattta taccctgaga aataagaaaa tgcaagaggc cataagaaaa 900
ttacggttcc aatatgttag ttctgcacag aatttctag 939

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<210> 461
 <211> 313
 <212> PRT
 <213> Homo sapiens

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<400> 461
Met Ser Pro Glu Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Leu Gly
  1              5              10              15

Leu Pro Ile Arg Pro Glu Gln Gln Ala Val Phe Phe Thr Leu Phe Leu
      20              25              30

Gly Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Leu Ile Met Leu Leu
      35              40              45

Ile Gln Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
      50              55              60

His Leu Ala Leu Thr Asp Ile Ser Phe Ser Ser Val Thr Val Pro Lys
      65              70              75              80

Met Leu Met Asp Met Arg Thr Lys Tyr Lys Ser Ile Leu Tyr Glu Glu
      85              90              95

Cys Ile Ser Gln Met Tyr Phe Phe Ile Phe Phe Thr Asp Leu Asp Ser
      100              105              110

Phe Leu Ile Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
      115              120              125

Pro Leu His Tyr Thr Val Ile Met Arg Glu Glu Leu Cys Val Phe Leu
      130              135              140

Val Ala Val Ser Trp Ile Leu Ser Cys Ala Ser Ser Leu Ser His Thr
      145              150              155              160

Leu Leu Leu Thr Arg Leu Ser Phe Cys Ala Ala Asn Thr Ile Pro His
      165              170              175

Val Phe Cys Asp Leu Ala Ala Leu Leu Lys Leu Ser Cys Ser Asp Ile
      180              185              190

Phe Leu Asn Glu Leu Val Met Phe Thr Val Gly Val Val Val Ile Thr
      195              200              205

Leu Pro Phe Met Cys Ile Leu Val Ser Tyr Gly Tyr Ile Gly Ala Thr
      210              215              220

Ile Leu Arg Val Pro Ser Thr Lys Gly Ile His Lys Ala Leu Ser Thr
      225              230              235              240

Cys Gly Ser His Leu Ser Val Val Ser Leu Tyr Tyr Gly Ser Ile Phe

```


245

250

255

Gly Gln Tyr Leu Phe Pro Thr Val Ser Ser Ser Ile Asp Lys Asp Val
260 265 270

Ile Val Ala Leu Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu Gly Lys Leu
290 295 300

Phe Ser Arg Ala Thr Phe Phe Ser Trp
305 310

<210> 462

<211> 966

<212> DNA

<213> Homo sapiens

<400> 462

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atgagccctg agaaccagag cagcgtgtcc gagttcctcc ttctgggcct ccccatccgg 60
ccagagcagc aggctgtggt cttcacccctg ttccctgggca tgtacctgac cacggtgctg 120
gggaacctgc tcatcatgct gctcatccag ctggactctc accttcacac ccccatgtac 180
ttcttctctc gccacttggc tctcactgac atctcctttt catctgtcac tgtccctaag 240
atgctgatgg acatgcgga taagtacaaa tcgacacctc atgaggaatg catttctcag 300
atgtattttt ttatatatttt tactgacctg gacagcttcc ttattacatc aatggcatat 360
gaccgatatg ttgccatag tcacctctc cactacactg tcatcatgag ggaagagctc 420
tgtgtcttct tagtggctgt atcttggatt ctgtcttgtg ccagctccct ctctcacacc 480
cttctcctga cccggtgtgc tttctgtgct gcgaacacca tcccccatgt cttctgtgac 540
cttgtgcccc tgctcaagct gtctgtctca gatattctcc tcaatgagct ggtcatgttc 600
acagtagggg tgggtggtcat taccctgcca ttcatgtgta tcctgggtatc atatggctac 660
attggggcca ccatcctgag ggtccccttca accaaaggga tccacaaagc attgtccaca 720
tgtggctccc atctctctgt ggtgtctctc tattatgggt caatatttgg ccagtacctt 780
ttcccgactg taagcagttc tattgacaag gatgtcattg tggctctcat gtacacggtg 840
gtcacaccca tgttgaacct ctttatctac agccttagga acaggacat gaaagargcc 900
cttgggaaac tcttcagtag agcaacattt ttctccttgg tgacatctga ctttttaaaa 960
aattag                                     966

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<210> 463

<211> 307

<212> PRT

<213> Homo sapiens

<400> 463

Met Gly Gln His Asn Leu Thr Val Leu Thr Glu Phe Ile Leu Met Glu
1 5 10 15

Leu Thr Arg Arg Pro Glu Leu Gln Ile Pro Leu Phe Gly Val Phe Leu
20 25 30

Val Ile Tyr Leu Ile Thr Val Val Gly Asn Leu Thr Met Ile Ile Leu
35 40 45

Thr Lys Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Ser Ile Arg
50 55 60

His Leu Ala Ser Val Asp Leu Gly Asn Ser Thr Val Ile Cys Pro Lys
65 70 75 80

Val Leu Ala Asn Phe Val Val Asp Arg Asn Thr Ile Ser Tyr Tyr Ala
 85 90 95
 Cys Ala Ala Gln Leu Ala Phe Phe Leu Met Phe Ile Ile Ser Glu Phe
 100 105 110
 Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Leu Tyr Tyr Val Ile Met Ser Gln Arg Leu Cys His Val Leu
 130 135 140
 Val Gly Ile Gln Tyr Leu Tyr Ser Thr Phe Gln Ala Leu Met Phe Thr
 145 150 155 160
 Ile Lys Ile Phe Thr Leu Thr Phe Cys Gly Ser Asn Val Ile Ser His
 165 170 175
 Phe Tyr Cys Asp Asp Val Pro Leu Leu Pro Met Leu Cys Ser Asn Ala
 180 185 190
 Gln Glu Ile Glu Leu Leu Ser Ile Leu Phe Ser Val Phe Asn Leu Ile
 195 200 205
 Ser Ser Phe Leu Ile Val Leu Val Ser Tyr Met Leu Ile Leu Leu Ala
 210 215 220
 Ile Cys Gln Met His Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Gly Ser His Leu Thr Val Val Val Val Phe Tyr Gly Ser Leu Leu
 245 250 255
 Phe Met Tyr Met Gln Pro Asn Ser Thr His Phe Phe Asp Thr Asp Lys
 260 265 270
 Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Glu Glu Val Lys Asn Ala Phe Tyr Lys Leu
 290 295 300
 Phe Glu Asn
 305

<210> 464
 <211> 924
 <212> DNA
 <213> Homo sapiens

<400> 464
 atgggccaac acaatctaac agtgctaact gaattcattc tgatggaact cacaaggcgg 60
 cctgagctgc agattccoct ttttgaggatc ttccctcgta tctacctaac cacagtgggtg 120
 ggcaacctaa ctatgatcat tttgaccaa ctggactccc acttacatac acctatgtac 180
 ttttctatca gacatttggc ttctgttgat cttggtaatt ctactgtcat ttgtcccaag 240
 gtgctggcaa attttgttgt ggatcgaaat actatttcct attatgcatg tgctgcacag 300
 ctggcattct tccttatgtt cattatcagt gaatttttca tcctgtcagc catggcctat 360
 gaccgctatg tggccatttg taaccctctg ctctattatg ttattatgtc tcagcgactg 420
 tgtcatgtac tgggtgggcat tcaatatctc tacagcacat ttcaggctct gatgttcact 480
 attaagattt ttacattgac cttctgtggc tctaattgtca tcagtcattt ttactgtgat 540

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gatgttcctt tgctacctat gctttgotca aatgcacagg aaatagaatt gttgagcata 600
ctattttctg tatttaattt gatctcctcc tttctgatag tcttagtgtc ctacatgttg 660
attttgttag ctatatgtca aatgcattct gcagagggca ggaaaaaggc tttctccaca 720
tgtggttccc atttgacagt ggtgggttggt ttctatgggt ctctactctt catgtacatg 780
cagcccaatt ccactcactt ctttgatact gataaaatgg cttctgtggt ttacacttta 840
gtaatcccca tgcttaaccc tttgatttac agcttaagaa acgaagaggt gaaaaatgcc 900
ttctataagc tctttgagaa ttga 924

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<210> 465
 <211> 340
 <212> PRT
 <213> Homo sapiens

<400> 465

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Met Pro Cys Met Pro Cys Ala Leu Pro Thr Gly Gly Leu Leu Pro His
  1              5              10              15

Pro Gln His Thr Met Met Glu Ile Ala Asn Val Ser Ser Pro Glu Val
      20              25              30

Phe Val Leu Leu Gly Phe Ser Thr Arg Pro Ser Leu Glu Thr Val Leu
      35              40              45

Phe Ile Val Val Leu Ser Phe Tyr Met Val Ser Ile Leu Gly Asn Gly
      50              55              60

Ile Ile Ile Leu Val Ser His Thr Asp Val His Leu His Thr Pro Met
      65              70              75              80

Tyr Phe Phe Leu Ala Asn Leu Pro Phe Leu Asp Met Ser Phe Thr Thr
      85              90              95

Ser Ile Val Pro Gln Leu Leu Ala Asn Leu Trp Gly Pro Gln Lys Thr
      100              105              110

Ile Ser Tyr Gly Gly Cys Val Val Gln Phe Tyr Ile Ser His Trp Leu
      115              120              125

Gly Ala Thr Glu Cys Val Leu Leu Ala Thr Met Ser Tyr Asp Arg Tyr
      130              135              140

Ala Ala Ile Cys Arg Pro Leu His Tyr Thr Val Ile Met His Pro Gln
      145              150              155              160

Leu Cys Leu Gly Leu Ala Leu Ala Ser Trp Leu Gly Gly Leu Thr Thr
      165              170              175

Ser Met Val Gly Ser Thr Leu Thr Met Leu Leu Pro Leu Cys Gly Asn
      180              185              190

Asn Cys Ile Asp His Phe Phe Cys Glu Met Pro Leu Ile Met Gln Leu
      195              200              205

Ala Cys Val Asp Thr Ser Leu Asn Glu Met Glu Met Tyr Leu Ala Ser
      210              215              220

Phe Val Phe Val Val Leu Pro Leu Gly Leu Ile Leu Val Ser Tyr Gly
      225              230              235              240

His Ile Ala Arg Ala Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Arg

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Val Thr Glu Phe His Leu Leu Gly Phe Gly Val Gln His Glu Phe Gln
 50 55 60
 His Val Leu Phe Ile Val Leu Leu Leu Ile Tyr Val Thr Ser Leu Ile
 65 70 75 80
 Gly Asn Ile Gly Met Ile Leu Leu Ile Lys Thr Asp Ser Arg Leu Gln
 85 90 95
 Thr Pro Met Tyr Phe Phe Pro Gln His Leu Ala Phe Val Asp Ile Cys
 100 105 110
 Tyr Thr Ser Ala Ile Thr Pro Lys Met Leu Gln Ser Phe Thr Glu Glu
 115 120 125
 Asn Asn Leu Ile Thr Phe Arg Gly Cys Val Ile Gln Phe Leu Val Tyr
 130 135 140
 Ala Thr Phe Ala Thr Ser Asp Cys Tyr Leu Leu Ala Ile Met Ala Met
 145 150 155 160
 Asp Cys Tyr Val Ala Ile Cys Lys Pro Leu Arg Tyr Pro Met Ile Met
 165 170 175
 Ser Gln Thr Val Tyr Ile Gln Leu Val Ala Gly Ser Tyr Ile Ile Gly
 180 185 190
 Ser Ile Asn Ala Ser Val His Thr Gly Phe Thr Phe Ser Leu Ser Phe
 195 200 205
 Cys Lys Ser Asn Lys Ile Asn His Phe Phe Cys Asp Gly Leu Pro Ile
 210 215 220
 Leu Ala Leu Ser Cys Ser Asn Ile Asp Ile Asn Ile Ile Leu Asp Val
 225 230 235 240
 Val Phe Val Gly Phe Asp Leu Met Phe Thr Glu Leu Val Ile Ile Phe
 245 250 255
 Ser Tyr Ile Tyr Ile Met Val Thr Ile Leu Lys Met Ser Ser Thr Ala
 260 265 270
 Gly Arg Lys Lys Ser Phe Ser Thr Cys Ala Ser His Leu Thr Ala Val
 275 280 285
 Thr Ile Phe Tyr Gly Thr Leu Ser Tyr Met Tyr Leu Gln Pro Gln Ser
 290 295 300
 Asn Asn Ser Gln Glu Asn Met Lys Val Ala Ser Ile Phe Tyr Gly Thr
 305 310 315 320
 Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu
 325 330 335
 Gly Lys

<210> 468

<211> 1017

<212> DNA
<213> Homo sapiens

<400> 468
atgaaaagtc aaattgaaaa aagtgactta aaatatagag ccattttatt gcaaaaagtc 60
acaaggatgt tcctgctttt ctgggtcctt ctcttggtcc tttctagact tttggtagtc 120
atgggtcgag gaaacagcac tgaagtgact gaattccatc ttctgggatt tgggtgtccaa 180
cacgaatttc agcatgtcct tttcattgta cttcttctta tctatgtgac ctccctgata 240
ggaaatattg gaatgatctt actcatcaag accgattcca gacttcaaac acccatgtac 300
ttttttccac aacatttggc ttttggtgat atctgttata cttctgctat cactcccaag 360
atgctccaaa gcttcacaga agaaaataat ttgataacat ttcggggctg tgtgatacaa 420
ttcttagttt atgcaacatt tgcaaccagt gactgttacc tcctagctat tatggcaatg 480
gattgttatg ttgccatctg taagccctt cgctatccca tgatcatgtc ccaaacagtc 540
tacatccaac tcgtagctgg ctcatatatt ataggctcaa taaatgcctc tgtacataca 600
ggttttacat tttcactgtc cttctgcaag tctaataaaa tcaatcactt tttctgtgat 660
ggctctcccaa ttcttgccct ttcattgtcc aacattgaca tcaacatcat tctagatgtt 720
gtctttgtgg gatttgactt gatgttcaat gagttggtca tcatcttttc ctacatctac 780
attatggtca ccaccttgaa gatgtcttct actgctggga ggaaaaaatc cttctccaca 840
tgtgcctccc acctgacagc agtaaccatt ttctatggga cactctctta catgtactta 900
cagcctcagt ctaataattc tcaggagaat atgaaagtag cctctatatt ttatggcact 960
gttattccca tgttgaatcc tttaatctat agcttgagaa ataaggaagg aaaataa 1017

<210> 469
<211> 311
<212> PRT
<213> Homo sapiens

<400> 469
Met Glu Asn Gln Ser Ser Ile Ser Glu Phe Phe Leu Arg Gly Ile Ser
1 5 10 15
Ala Pro Pro Glu Gln Gln Gln Ser Leu Phe Gly Ile Phe Leu Cys Met
20 25 30
Tyr Leu Val Thr Leu Thr Gly Asn Leu Leu Ile Ile Leu Ala Ile Gly
35 40 45
Ser Asp Leu His Leu His Thr Pro Met Tyr Phe Phe Leu Ala Asn Leu
50 55 60
Ser Phe Val Asp Met Gly Leu Thr Ser Ser Thr Val Thr Lys Met Leu
65 70 75 80
Val Asn Ile Gln Thr Arg His His Thr Ile Ser Tyr Thr Gly Cys Leu
85 90 95
Thr Gln Met Tyr Phe Phe Leu Met Phe Gly Asp Leu Asp Ser Phe Phe
100 105 110
Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His Pro Leu
115 120 125
Cys Tyr Ser Thr Val Met Arg Pro Gln Val Cys Ala Leu Met Leu Ala
130 135 140
Leu Cys Trp Val Leu Thr Asn Ile Val Ala Leu Thr His Thr Phe Leu
145 150 155 160
Met Ala Arg Leu Ser Phe Cys Val Thr Gly Glu Ile Ala His Phe Phe
165 170 175

Cys Asp Ile Thr Pro Val Leu Lys Leu Ser Cys Ser Asp Thr His Ile
 180 185 190
 Asn Glu Met Met Val Phe Val Leu Gly Gly Thr Val Leu Ile Val Pro
 195 200 205
 Phe Leu Cys Ile Val Thr Ser Tyr Ile His Ile Val Pro Ala Ile Leu
 210 215 220
 Arg Val Arg Thr Arg Gly Gly Val Gly Lys Ala Phe Ser Thr Cys Ser
 225 230 235 240
 Ser His Leu Cys Val Val Cys Val Phe Tyr Gly Thr Leu Phe Ser Ala
 245 250 255
 Tyr Leu Cys Pro Pro Ser Ile Ala Ser Glu Glu Lys Asp Ile Ala Ala
 260 265 270
 Ala Ala Met Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
 275 280 285
 Ser Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Lys Arg Leu Phe Ser
 290 295 300
 His Arg Ser Ile Val Ser Ser
 305 310

<210> 470
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 470
 atggaaaacc aatccagcat ttctgaattt ttctccgag gaatatcagc gcctccagag 60
 caacagcagt ccctcttcgg aattttcctg tgtatgtatc ttgtcacctt gactgggaac 120
 ctgctcatca tcctggccat tggtcttgac ctgcacctcc acacccccat gtactttttc 180
 ttggccaacc tgtcttttgt tgacatgggt ttaacgtcct ccacagttac caagatgctg 240
 gtgaatatac agactcggca tcacaccatc tcctatacgg gttgcctcac gcaaatgtat 300
 ttctttctga tgtttggtga tctagacagc ttcttcctgg ctgccatggc gtatgaccgc 360
 tatgtggcca tttgccacc cctctgctac tccacagtca tgaggcccca agtctgtgcc 420
 ctaatgcttg cattgtgctg ggtcctcacc aatategttg ccctgactca cagttcctc 480
 atggctcggg tgtccttctg tgtgactggg gaaattgctc actttttctg tgacatcact 540
 cctgtcctga agctgtcatg ttctgacacc cacatcaacg agatgatggg ttttgtcttg 600
 ggaggcaccg tactcatcgt ccccttttta tgcattgtca cctcctacat ccacattgtg 660
 ccagctatcc tgagggtccg aacccgtggg ggggtgggca aggccttttc cacctgcagt 720
 tcccacctct gcgttgtttg tgtgttctat gggaccctct tcagtgccta cctgtgtcct 780
 cctccattg cctctgaaga gaaggacatt gcagcagctg caatgtacac catagtgact 840
 cccatggtga acccctttat ctatagccta aggaacaagg acatgaaggg ggccctaaag 900
 aggcctttca gtcacaggag tattgtttcc tcttag 936

<210> 471
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 471
 Met Glu Gly Asn Lys Thr Trp Ile Thr Asp Ile Thr Leu Pro Arg Phe
 1 5 10 15

Gln Val Gly Pro Ala Leu Glu Ile Leu Leu Cys Gly Leu Phe Ser Ala
20 25 30

Phe Tyr Thr Leu Thr Leu Leu Gly Asn Gly Val Ile Phe Gly Ile Ile
35 40 45

Cys Leu Asp Cys Lys Leu His Thr Pro Met Tyr Phe Phe Leu Ser His
50 55 60

Leu Ala Ile Val Asp Ile Ser Tyr Ala Ser Asn Tyr Val Pro Lys Met
65 70 75 80

Leu Thr Asn Leu Met Asn Gln Glu Ser Thr Ile Ser Phe Phe Pro Cys
85 90 95

Ile Met Gln Thr Phe Leu Tyr Leu Ala Phe Ala His Val Glu Cys Leu
100 105 110

Ile Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Asp Ile Cys His Pro
115 120 125

Leu Arg Tyr Asn Ile Leu Met Ser Trp Arg Val Cys Thr Val Leu Ala
130 135 140

Val Ala Ser Trp Val Phe Ser Phe Leu Leu Ala Leu Val Pro Leu Val
145 150 155 160

Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe
165 170 175

Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu
180 185 190

Asn Gln Val Val Ile Phe Ala Ala Cys Val Phe Ile Leu Val Gly Pro
195 200 205

Leu Cys Leu Val Leu Val Ser Tyr Leu Arg Ile Leu Ala Ala Ile Leu
210 215 220

Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser
225 230 235 240

Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val Thr
245 250 255

Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu
260 265 270

Ser Leu Phe Tyr Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile Tyr
275 280 285

Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Arg Arg Ala Leu Arg
290 295 300

Lys Glu Arg Leu Thr
305

<210> 472

<211> 930

<212> DNA
<213> Homo sapiens

<400> 472
atggaaggca acaagacatg gatcacagac atcaccttgc cgcgattcca ggttggtcca 60
gcaactggaga ttctcctctg tggacttttc tctgccttct atacactcac cctgctgggg 120
aatggggtca tctttgggat tatctgcctg gactgtaagc ttcacacacc catgtacttc 180
ttcctctcac acctggccat tgttgacata tcctatgctt ccaactatgt cccaagatg 240
ctgacgaatc ttatgaacca ggaaagcacc atctcctttt ttccatgcat aatgcagaca 300
ttcttgattt tggcttttgc tcacgtagag tgtctgattt tgggtggtgat gtcctatgat 360
cgctatgcgg acatctgcca ccccttacgt tacaatatcc tcatgagctg gagagtgtgc 420
actgtcctgg ctgtggcttc ctgggtgttc agcttctcc tggctctggt cccttttagtt 480
ctcatcctga ggctgccctt ctgcgggcct catgaaatca accacttctg tgaaatcctg 540
tctgtcctca agttggcctg tgctgacacc tggctcaacc aggtggtcat ctttgcagcc 600
tgctgtttca tcctgggtggg gccactctgc ctggtgctgg tctcctactt gcgcatcctg 660
gccgccatct tgaggatcca gtctggggag ggccgcagaa aggccttctc cacctgctcc 720
tcccaccttt gcgtgggtggg actcttcttt ggcagcgcca ttgtcacgta catggccccc 780
aagtcccgcc atcctgagga gcagcagaaa gttctttccc tgttttacag ccttttcaat 840
ccaatgctga accccctgat atatagccta aggaatgcag aggtcaaggg cgccctgagg 900
agggcactga ggaaggagag gctgacgtga 930

<210> 473
<211> 312
<212> PRT
<213> Homo sapiens

<400> 473
Met Arg Leu Ala Asn Gln Thr Leu Gly Gly Asp Phe Phe Leu Leu Gly
1 5 10 15
Ile Phe Ser Gln Ile Ser His Pro Gly Arg Leu Cys Leu Leu Ile Phe
20 25 30
Ser Ile Phe Leu Met Ala Val Ser Trp Asn Ile Thr Leu Ile Leu Leu
35 40 45
Ile His Ile Asp Ser Ser Leu His Thr Pro Met Tyr Phe Phe Ile Asn
50 55 60
Gln Leu Ser Leu Ile Asp Leu Thr Tyr Ile Ser Val Thr Val Pro Lys
65 70 75 80
Met Leu Val Asn Gln Leu Ala Lys Asp Lys Thr Ile Ser Val Leu Gly
85 90 95
Cys Gly Thr Gln Met Tyr Phe Tyr Leu Gln Leu Gly Gly Ala Glu Cys
100 105 110
Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125
Pro Leu Arg Tyr Ser Val Leu Met Ser His Arg Val Cys Leu Leu Leu
130 135 140
Ala Ser Gly Cys Trp Phe Val Gly Ser Val Asp Gly Phe Met Leu Thr
145 150 155 160
Pro Ile Ala Met Ser Phe Pro Phe Cys Arg Ser His Glu Ile Gln His
165 170 175

Phe Phe Cys Glu Val Pro Ala Val Leu Lys Leu Ser Cys Ser Asp Thr
 180 185 190
 Ser Leu Tyr Lys Ile Phe Met Tyr Leu Cys Cys Val Ile Met Leu Leu
 195 200 205
 Ile Pro Val Thr Val Ile Ser Val Ser Tyr Tyr Tyr Ile Ile Leu Thr
 210 215 220
 Ile His Lys Met Asn Ser Val Glu Gly Arg Lys Lys Ala Phe Thr Thr
 225 230 235 240
 Cys Ser Ser His Ile Thr Val Val Ser Leu Phe Tyr Gly Ala Ala Ile
 245 250 255
 Tyr Asn Tyr Met Leu Pro Ser Ser Tyr Gln Thr Pro Glu Lys Asp Met
 260 265 270
 Met Ser Ser Phe Phe Tyr Thr Ile Leu Thr Pro Val Leu Asn Pro Ile
 275 280 285
 Ile Tyr Ser Phe Arg Asn Lys Asp Val Thr Arg Ala Leu Lys Lys Met
 290 295 300
 Leu Ser Val Gln Lys Pro Pro Tyr
 305 310

<210> 474
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 474
 atcgggctgg ccaaccagac cctgggtggt gactttttcc tgttgggaat cttcagccag 60
 atctcacacc ctggccgcct ctgcttgctt atcttcagta tatttttgat ggctgtgtct 120
 tggaatatta cattgatact tctgatccac attgactcct ctctgcatac tcccatgtac 180
 ttctttataa accagctctc actcatagac ttgacatata tttctgtcac tgtcccaaaa 240
 atgctgggtga accagctggc caaagacaag accatctcgg tccttgggtg tggcaccag 300
 atgtacttct acctgcagtt gggagggtgca gagtgtgccc ttctagccgc catggcctat 360
 gaccgctatg tggctatctg ccatcctctc cgttactctg tgctcatgag ccatagggta 420
 tgtctcctcc tggcatcagg ctgctgggtt gtgggctcag tggatggctt catgtcact 480
 cccatcgcca tgagcttccc cttctgcaga tcccatgaga ttcagcactt cttctgtgag 540
 gtccctgctg ttttgaagct ctcttgctca gacacctcac tttacaagat tttcatgtac 600
 ttgtgctgtg tcatcatgct cctgatacct gtgacgggtc tttcagtgtc ttactactat 660
 atcatcctca ccatccataa gatgaactca gttgagggtc ggaaaaaggc cttcaccacc 720
 tgctcctccc acattacagt ggtcagcctc ttctatggag ctgctattta caactacatg 780
 ctccccagct cctaccaaac tcctgagaaa gatatgatgt catccttttt ctacactatc 840
 cttacacctg tcttgaatcc tatcatttac agtttcagga ataaggatgt cacaagggct 900
 ttgaaaaaaa tgctgagcgt gcagaaacct ccatattaa 939

<210> 475
 <211> 331
 <212> PRT
 <213> Homo sapiens

<400> 475
 Met Thr Phe Phe Ser Ser Gly Gly Asn Cys Glu Pro Val Met Cys Ser
 1 5 10 15

Gly	Asn	Gln	Thr	Ser	Gln	Asn	Gln	Thr	Ala	Ser	Thr	Asp	Phe	Thr	Leu	
			20					25					30			
Thr	Gly	Leu	Phe	Ala	Glu	Ser	Lys	His	Ala	Ala	Leu	Leu	Tyr	Thr	Val	
		35					40					45				
Thr	Phe	Leu	Leu	Phe	Leu	Met	Ala	Leu	Thr	Gly	Asn	Ala	Leu	Leu	Ile	
	50					55					60					
Leu	Leu	Ile	His	Ser	Glu	Pro	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	
	65				70					75					80	
Ile	Ser	Gln	Leu	Ala	Leu	Met	Asp	Leu	Met	Tyr	Leu	Cys	Val	Thr	Val	
				85					90					95		
Pro	Lys	Met	Leu	Val	Gly	Gln	Val	Thr	Gly	Asp	Asp	Thr	Ile	Ser	Pro	
			100					105					110			
Ser	Gly	Cys	Gly	Ile	Gln	Met	Phe	Phe	His	Leu	Thr	Leu	Ala	Gly	Ala	
		115					120					125				
Glu	Val	Phe	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Ala	Ala	Val	
	130					135					140					
Cys	Arg	Pro	Leu	His	Tyr	Pro	Leu	Leu	Met	Asn	Gln	Arg	Val	Cys	Gln	
	145				150					155					160	
Leu	Leu	Val	Ser	Ala	Cys	Trp	Val	Leu	Gly	Met	Val	Asp	Gly	Leu	Leu	
				165					170					175		
Leu	Thr	Pro	Ile	Thr	Met	Ser	Phe	Pro	Phe	Cys	Gln	Ser	Arg	Lys	Ile	
			180					185					190			
Leu	Ser	Phe	Phe	Cys	Glu	Thr	Pro	Ala	Leu	Leu	Lys	Leu	Ser	Cys	Ser	
		195					200					205				
Asp	Val	Ser	Leu	Tyr	Lys	Met	Leu	Thr	Tyr	Leu	Cys	Cys	Ile	Leu	Met	
	210					215					220					
Leu	Leu	Thr	Pro	Ile	Met	Val	Ile	Ser	Ser	Ser	Tyr	Thr	Leu	Ile	Leu	
	225				230					235					240	
His	Leu	Ile	His	Arg	Met	Asn	Ser	Ala	Ala	Gly	Arg	Arg	Lys	Ala	Leu	
				245					250					255		
Ala	Thr	Cys	Ser	Ser	His	Met	Ile	Ile	Val	Leu	Leu	Leu	Phe	Gly	Ala	
			260					265					270			
Ser	Phe	Tyr	Thr	Tyr	Met	Leu	Arg	Ser	Ser	Tyr	His	Thr	Ala	Glu	Gln	
		275					280					285				
Asp	Met	Met	Val	Ser	Ala	Phe	Tyr	Thr	Ile	Phe	Thr	Pro	Val	Leu	Asn	
	290					295					300					
Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Thr	Arg	Ala	Leu	Arg	
	305				310					315					320	
Ser	Met	Met	Gln	Ser	Arg	Met	Asn	Gln	Glu	Lys						
				325					330							

<210> 476
 <211> 996
 <212> DNA
 <213> Homo sapiens

<400> 476
 atgactttttt tttcctcagg gggaaactgt gagccagtc tgtgctcagg gaatcagact 60
 tctcagaatc aaacagcaag cactgatttc accctcacgg gactctttgc tgagagcaag 120
 catgctgccc tcctctacac cgtgaccttc cttcttttct tgatggccct cactgggaat 180
 gccctcctca tcctcctcat ccactcagag ccccgctcc acacccccat gtacttcttc 240
 atcagccagc tcgcgctcat ggatctcatg tacctatgcg tgactgtgcc caagatgctt 300
 gtggggccagg tcaactggaga tgataccatt tccccgctcag gctgtgggat ccagatgttc 360
 ttccacctga ccctggctgg agctgaggtt ttctcctcgg ctgccatggc ctatgaccga 420
 tatgctgctg tttgcagacc tctccattac ccactgctga tgaaccagag ggtgtgccag 480
 ctctgggtgt cagcctgctg gggtttggga atgggtgatg gtttgttgct caccctcatt 540
 accatgagct tccccctttg ccagctctagg aaaatcctga gttttttctg tgagactcct 600
 gccctgctga agctctcctg ctctgacgtc tccctctata agatgctcac gtacctgtgc 660
 tgcacctca tgcttctcac ccccatcatg gtcacttcca gctcatacac cctcatcctg 720
 catctcatcc acaggatgaa ttctgccgcc ggccgcagga aggccttggc cacctgctcc 780
 tcccacatga tcatagtgt gctgctcttc ggtgcttct tctacaccta catgctccg 840
 agttcctacc acacagctga gcaggacatg atgggtgtctg ccttttacac catcttcact 900
 cctgtgctga acccctcat ttacagtctc cgcaacaag atgtcaccag ggctctgagg 960
 agcatgatgc agtcaagaat gaaccaagaa aagtag 996

<210> 477
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 477
 Met Thr Asn Thr Ser Ser Ser Asp Phe Thr Leu Leu Gly Leu Leu Val
 1 5 10 15
 Asn Ser Glu Ala Ala Gly Ile Val Phe Thr Val Ile Leu Ala Val Phe
 20 25 30
 Leu Gly Ala Val Thr Ala Asn Leu Val Met Ile Phe Leu Ile Gln Val
 35 40 45
 Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser
 50 55 60
 Ile Met Asp Thr Leu Phe Ile Cys Thr Thr Val Pro Lys Leu Leu Ala
 65 70 75 80
 Asp Met Val Ser Lys Glu Lys Ile Ile Ser Phe Val Ala Cys Gly Ile
 85 90 95
 Gln Ile Phe Leu Tyr Leu Thr Met Ile Gly Ser Glu Phe Phe Leu Leu
 100 105 110
 Gly Leu Met Ala Tyr Asp Cys Tyr Val Ala Val Cys Asn Pro Leu Arg
 115 120 125
 Tyr Pro Val Leu Met Asn Arg Lys Lys Cys Leu Leu Leu Ala Ala Gly
 130 135 140
 Ala Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro Ile Thr
 145 150 155 160

Met Asn Val Pro Tyr Cys Gly Ser Arg Ser Ile Asn His Phe Phe Cys
165 170 175

Glu Ile Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ser Leu Tyr
180 185 190

Glu Thr Leu Met Tyr Ile Cys Cys Val Leu Met Leu Leu Ile Pro Ile
195 200 205

Ser Ile Ile Ser Thr Ser Tyr Ser Leu Ile Leu Leu Thr Ile His Arg
210 215 220

Met Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Thr Thr Cys Ser Ser
225 230 235 240

His Leu Thr Val Val Ser Ile Phe Tyr Gly Ala Ala Phe Tyr Thr Tyr
245 250 255

Val Leu Pro Gln Ser Phe His Thr Pro Glu Gln Asp Lys Val Val Ser
260 265 270

Ala Phe Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser
275 280 285

Leu Arg Asn Lys Asp Val Ile Gly Ala Phe Lys Lys Val Phe Ala Cys
290 295 300

Cys Ser Ser Ala Gln Lys Val Ala Thr Ser Asp Ala
305 310 315

<210> 478
<211> 951
<212> DNA
<213> Homo sapiens

<400> 478
atgacgaaca catcatcctc tgacttcacc ctccctggggc ttctggtgaa cagtgaggct 60
gccgggattg tatttacagt gatccttget gttttcttgg gggccgtgac tgcaaatttg 120
gtcatgatat tcttgattca ggtggactct cgcctccaca ccccatgta ctttctgctc 180
agtcagctgt ccatcatgga cacccttttc atctgtacca ctgtcccaa actcctggca 240
gacatggttt ctaaagagaa gatcatttcc tttgtggcct gtggcatcca gatcttctc 300
tacctgacca tgattggttc tgagttcttc ctccctgggc tcatggccta tgactgctac 360
gtggctgtct gtaaccctct gagataccca gtccctgatga accgcaagaa gtgtcttttg 420
ctggctgctg gtgcctgggt tgggggctcc ctccgatggc ttctgctcac tcccatcacc 480
atgaatgtcc cttactgtgg ctcccgaagt atcaaccatt ttttctgtga gatcccagca 540
gttctgaaac tggcctgtgc agacacgtcc ttgtatgaaa ctctgatgta catctgctgt 600
gtcctcatgt tgctcatccc catctctatc atctccactt cctactccct catcttggtta 660
accatccacc gcatgccttc tgctgaaggt cgcaaaaagg ccttcaccac ttgttcctcc 720
cacttgactg tagtttagcat cttctatggg gctgccttct acacatacgt gctgccccag 780
tccttcacac ccccagagca ggacaaagta gtgtcagcct tctataccat tgtcacgccc 840
atgcttaatc ctctcatcta cagcctcaga aacaaggacg tcataggggc atttaaaaag 900
gtatttgcac gttgctcacc tgctcagaaa gtagcaacaa gtgatgctta g 951

<210> 479
<211> 317
<212> PRT
<213> Homo sapiens

<400> 479

Met	Glu	Gln	Ser	Asn	Tyr	Ser	Val	Tyr	Ala	Asp	Phe	Ile	Leu	Leu	Gly	1	5	10	15
Leu	Phe	Ser	Asn	Ala	Arg	Phe	Pro	Trp	Leu	Leu	Phe	Ala	Leu	Ile	Leu	20	25	30	
Leu	Val	Phe	Leu	Thr	Ser	Ile	Ala	Ser	Asn	Val	Val	Lys	Ile	Ile	Leu	35	40	45	
Ile	His	Ile	Asp	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Ser	50	55	60	
Gln	Leu	Ser	Leu	Arg	Asp	Ile	Leu	Tyr	Ile	Ser	Thr	Ile	Val	Pro	Lys	65	70	75	80
Met	Leu	Val	Asp	Gln	Val	Met	Ser	Gln	Arg	Ala	Ile	Ser	Phe	Ala	Gly	85	90	95	
Cys	Thr	Ala	Gln	His	Phe	Leu	Tyr	Leu	Thr	Leu	Ala	Gly	Ala	Glu	Phe	100	105	110	
Phe	Leu	Leu	Gly	Leu	Met	Ser	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	115	120	125	
Pro	Leu	His	Tyr	Pro	Val	Leu	Met	Ser	Arg	Lys	Ile	Cys	Trp	Leu	Ile	130	135	140	
Val	Ala	Ala	Ala	Trp	Leu	Gly	Gly	Ser	Ile	Asp	Gly	Phe	Leu	Leu	Thr	145	150	155	160
Pro	Val	Thr	Met	Gln	Phe	Pro	Phe	Cys	Ala	Ser	Arg	Glu	Ile	Asn	His	165	170	175	
Phe	Phe	Cys	Glu	Val	Pro	Ala	Leu	Leu	Lys	Leu	Ser	Cys	Thr	Asp	Thr	180	185	190	
Ser	Ala	Tyr	Glu	Thr	Ala	Met	Tyr	Val	Cys	Cys	Ile	Met	Met	Leu	Leu	195	200	205	
Ile	Pro	Phe	Ser	Val	Ile	Ser	Gly	Ser	Tyr	Thr	Arg	Ile	Leu	Ile	Thr	210	215	220	
Val	Tyr	Arg	Met	Ser	Glu	Ala	Glu	Gly	Arg	Gly	Lys	Ala	Val	Ala	Thr	225	230	235	240
Cys	Ser	Ser	His	Met	Val	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ala	Ala	Met	245	250	255	
Tyr	Thr	Tyr	Val	Leu	Pro	His	Ser	Tyr	His	Thr	Pro	Glu	Gln	Asp	Lys	260	265	270	
Ala	Val	Ser	Ala	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Met	Leu	Asn	Pro	Leu	275	280	285	
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Thr	Gly	Ala	Leu	Gln	Lys	Val	290	295	300	
Val	Gly	Arg	Cys	Val	Ser	Ser	Gly	Lys	Val	Thr	Thr	Phe	305	310	315				

<210> 480
 <211> 954
 <212> DNA
 <213> Homo sapiens

<400> 480
 atggagcaga gcaattattc cgtgtatgcc gactttatcc ttctgggttt gttcagcaac 60
 gcccgtttcc cctggcttct ctttgccctc attctcctgg tctttttgac ctccatagcc 120
 agcaacgtgg tcaagatcat tctcatccac atagactccc gcctccacac ccccatgtac 180
 ttctgtctca gccagctctc cctcagggac atcctgtata ttccaccat tgtgccc aaa 240
 atgctggctg accaggtgat gagccagaga gccatttctt ttgctggatg cactgccc aa 300
 cacttctctt acttgacctt agcaggggct gagttcttcc tcctaggact catgtcctat 360
 gatcgctacg tagccatctg caaccctctg cactatcctg tcctcatgag ccgcaagatc 420
 tgctgggtga ttgtggcggc agcctggctg ggaggggtcta tcgatgggtt cttgctcacc 480
 cccgtcacca tgcagttccc cttctgtgcc tctcgggaga tcaaccactt cttctgcgag 540
 gtgcctgccc ttctgaagct ctctgcacg gacacatcag cctacgagac agccatgtat 600
 gtctgtctga ttatgatgct cctcatcctt ttctctgtca tctcgggctc ttacacaaga 660
 attctcatta ctgtttatag gatgagcgag gcagagggga ggggaaaggc tgtggccacc 720
 tgctcctcac acatgggtgt tgtcagcctc ttctatgggg ctgccatgta cacatacgtg 780
 ctgcctcatt cttaccacac ccctgagcag gacaaagctg tatctgcctt ctacaccatc 840
 cttactccca tgctcaatcc actcatttac agccttagga acaaggatgt cacagggggc 900
 ctacagaagg ttgtggggag gtgtgtgtcc tcaggaaagg taaccacttt ctaa 954

<210> 481
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 481
 Met Gly Gly Lys Gln Pro Trp Val Thr Glu Phe Ile Leu Val Gly Phe
 1 5 10 15
 Gln Val Gly Pro Ala Leu Ala Ile Leu Leu Cys Gly Leu Phe Ser Val
 20 25 30
 Phe Tyr Thr Leu Thr Leu Leu Gly Asn Gly Val Ile Phe Gly Ile Ile
 35 40 45
 Cys Leu Asp Ser Lys Leu His Thr Pro Met Tyr Phe Phe Leu Ser His
 50 55 60
 Leu Ala Ile Ile Asp Met Ser Tyr Ala Ser Asn Asn Val Pro Lys Met
 65 70 75 80
 Leu Ala Asn Leu Met Asn Gln Lys Ser Thr Ile Ser Phe Val Pro Cys
 85 90 95
 Ile Met Gln Thr Phe Leu Tyr Leu Ala Phe Ala Val Thr Glu Cys Leu
 100 105 110
 Ile Leu Val Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125
 Phe Gln Tyr Thr Val Ile Met Ser Trp Arg Val Cys Thr Ile Leu Ala
 130 135 140
 Ser Thr Cys Trp Ile Ile Ser Phe Leu Met Ala Leu Val His Ile Thr
 145 150 155 160
 His Ile Leu Arg Pro Pro Phe Cys Gly Pro Gln Lys Ile Asn His Phe

165	170	175
Ile Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Gly Pro Arg		
180	185	190
Leu Asn Gln Val Val Leu Tyr Ala Gly Ser Ala Phe Ile Val Glu Gly		
195	200	205
Pro Leu Cys Leu Glu Leu Val Ser Asn Leu His Ile Leu Ser Arg His		
210	215	220
Leu Glu Asp Pro Val Met Gly Arg Ala Ala Asp Arg Leu Thr Leu Pro		
225	230	235
Ala Pro Ser His Leu Cys Met Val Gly Leu Leu Phe Gly Ser Thr Met		
245	250	255
Val Met Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys		
260	265	270
Val Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Met Leu Asn Pro Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val		
290	295	300
Leu Trp Lys Gln Arg Ser Lys		
305	310	

<210> 482
 <211> 936
 <212> DNA
 <213> Homo sapiens

<400> 482
 atgggaggca agcagccctg ggtcacagaa ttcactcctgg tgggattcca gggttggtcca 60
 gcactggcga ttctcctctg tggactcttc tctgtcttct atacaactcac cctgctgggg 120
 aatgggggtca tctttgggat tatctgcctg gactctaagc ttcacacacc catgtacttc 180
 ttctctcac acctggccat cattgacatg tcctatgctt ccaacaatgt tcccaagatg 240
 ttggcaaacc taatgaacca gaaaagcacc atctcctttg ttccatgcat aatgcagact 300
 tttttgtatt tggcttttgc tggtacagag tgctgattt tgggtggtgat gtcctatgat 360
 aggtatgtgg ccatctgccca ccttttccag tacactgtca tcatgagctg gagagtgtgc 420
 acgatcctgg cctcaacatg ctggataatt agctttctca tggctctggg ccatataact 480
 catattctga ggccgccttt ttgtggccca caaaagatca accactttat ctgtcaaata 540
 atgtccgtat tcaaattggc ctgtgctggc cctaggctca accagggtgg cctatatgcg 600
 ggttctgcgt tcatcgtaga ggggcccgtc tgcttgagagc tgggtctcca cttgcacatc 660
 ctgtcgcgcc atcttgagga tccagtaatg gggagggccg cagaccgact tactcttctc 720
 gctccttccc acctttgcat ggtgggactc ctttttggca gcaccatgg catgtacatg 780
 gccccaaagt cccgccaccc tgaggagcag cagaaggctc tttccctgtt ttacagcctt 840
 ttcaaccgca tgctgaaccc cttgatctac agcctgagga acgcagaggt caagggtgcc 900
 ctgaaaagag tgttgtggaa acagagatca aagtga 936

<210> 483
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 483
 Met Glu Ser Asn Gln Thr Trp Ile Thr Glu Val Ile Leu Leu Gly Phe

1	5	10	15
Gln Val Asp	Pro Ala Leu Glu Leu Phe	Leu Phe Gly Phe	Phe Leu Leu
	20	25	30
Phe Tyr Ser	Leu Thr Leu Met Gly Asn Gly	Ile Ile Leu Gly	Leu Ile
	35	40	45
Tyr Leu Asp	Ser Arg Leu His Thr Pro Met	Tyr Val Phe Leu Ser	His
	50	55	60
Leu Ala Ile	Val Asp Met Ser Tyr Ala Ser	Ser Thr Val Pro Lys	Met
	65	70	75
Leu Ala Asn	Leu Val Met His Lys Lys Val	Ile Ser Phe Ala Pro	Cys
	85	90	95
Ile Leu Gln	Thr Phe Leu Tyr Leu Ala Phe	Ala Ile Thr Glu Cys	Leu
	100	105	110
Ile Leu Val	Met Met Cys Tyr Asp Arg Tyr	Val Ala Ile Cys His	Pro
	115	120	125
Leu Gln Tyr	Thr Leu Ile Met Asn Trp Arg	Val Cys Thr Val Leu	Ala
	130	135	140
Ser Thr Cys	Trp Ile Phe Ser Phe Leu Leu	Ala Leu Val His Ile	Thr
	145	150	155
Leu Ile Leu	Arg Leu Pro Phe Cys Gly	Pro Gln Lys Ile Asn	His Phe
	165	170	175
Phe Cys Gln	Ile Met Ser Val Phe Lys	Leu Ala Cys Ala Asp	Thr Arg
	180	185	190
Leu Asn Gln	Val Val Leu Phe Ala Gly	Ser Ala Phe Ile Leu	Val Gly
	195	200	205
Pro Leu Cys	Leu Val Leu Val Ser Tyr	Leu His Ile Leu	Val Ala Ile
	210	215	220
Leu Arg Ile	Gln Ser Gly Glu Gly Arg	Arg Lys Ala Phe Ser	Thr Cys
	225	230	235
Ser Ser His	Leu Cys Val Val Gly Leu	Phe Phe Gly Ser Ala	Ile Val
	245	250	255
Met Tyr Met	Ala Pro Lys Ser Ser His	Ser Gln Glu Arg Arg	Lys Ile
	260	265	270
Leu Ser Leu	Phe Tyr Ser Leu Phe Asn	Pro Ile Leu Asn Pro	Leu Ile
	275	280	285
Tyr Ser Leu	Arg Asn Ala Glu Val Lys	Gly Ala Leu Lys Arg	Val Leu
	290	295	300
Trp Lys Gln	Arg Ser Met		
	305	310	

<211> 933
 <212> DNA
 <213> Homo sapiens

<400> 484
 atggaaagca atcagacctg gatcacagaa gtcacctctgt tgggattcca ggtggaccca 60
 gctctggagt tgctctctct tgggtttttc ttgctattct acagcttaac cctgatggga 120
 aatgggatta tcctggggct catctacttg gactctagac tgcacacacc catgtatgtc 180
 ttctgtgcac acctggccat tgtggacatg tcctatgcct cgagtactgt ccctaagatg 240
 ctagcaaatc ttgtgatgca caaaaaagtc atctcctttg ctcccttgcac acttcagact 300
 tttttgtatt tggcgtttgc tattacagag tgtctgattt tgggtgatgat gtgctatgat 360
 cggtagtggt caatctgtca ccccttgcaa tacaccctca ttatgaactg gagagtgtgc 420
 actgtcctgg cctcaacttg ctggatattt agctttctct tggctctggg ccatattact 480
 cttattctga ggctgccttt ttgtggccca caaaagatca accacttttt ctgtcaaata 540
 atgtccgtat tcaaattggc ctgtgctgac actaggctca accagggtgg cctattttgcg 600
 ggttctgcgt tcatcttagt ggggcccgtc tgccctgggc tgggtctcta cttgcacatc 660
 ctggtggcca tcttgaggat ccagtctggg gagggccgca gaaaggcctt ctctacctgc 720
 tcctcccacc tctgcgtggg ggggcttttc tttggcagcg ccattgtcat gtacatggcc 780
 cccaagtcaa gccattctca agaacggagg aagatccttt ccctgtttta cagccttttc 840
 aacccgatcc tgaacccct catctacagc cttaggaatg cagagggtgaa aggggctcta 900
 aagagagtcc tttggaaaca gagatcaatg tga 933

<210> 485
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 485
 Met Gly Asp Asn Gln Ser Arg Val Thr Glu Phe Ile Leu Val Gly Phe
 1 5 10 15
 Gln Leu Ser Val Glu Met Glu Val Leu Leu Phe Trp Ile Phe Ser Leu
 20 25 30
 Leu Tyr Leu Phe Ser Leu Leu Ala Asn Gly Met Ile Leu Gly Leu Ile
 35 40 45
 Cys Leu Asp Pro Arg Leu Arg Thr Pro Met Tyr Phe Phe Leu Ser His
 50 55 60
 Leu Ala Val Ile Asp Ile Tyr Tyr Ala Ser Ser Asn Leu Leu Asn Met
 65 70 75 80
 Leu Glu Asn Leu Val Lys His Lys Lys Thr Ile Ser Phe Ile Ser Cys
 85 90 95
 Ile Met Gln Met Ala Leu Tyr Leu Thr Phe Ala Ala Ala Val Cys Met
 100 105 110
 Ile Leu Val Val Met Ser Tyr Asp Arg Phe Val Ala Ile Cys His Pro
 115 120 125
 Leu His Tyr Thr Val Ile Met Asn Trp Arg Val Cys Thr Val Leu Ala
 130 135 140
 Ile Thr Ser Trp Ala Cys Gly Phe Ser Leu Ala Leu Ile Asn Leu Ile
 145 150 155 160
 Leu Leu Leu Arg Leu Pro Phe Cys Gly Pro Gln Glu Val Asn His Phe
 165 170 175

Phe Gly Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp
 180 185 190
 Ile Asn Glu Ile Phe Val Phe Ala Gly Gly Val Phe Val Leu Val Gly
 195 200 205
 Pro Leu Ser Leu Met Leu Ile Ser Tyr Met Arg Ile Leu Leu Ala Ile
 210 215 220
 Leu Lys Ile Gln Ser Lys Glu Gly Arg Lys Lys Ala Phe Ser Thr Cys
 225 230 235 240
 Ser Ser His Leu Cys Val Val Gly Leu Tyr Phe Gly Met Ala Met Val
 245 250 255
 Val Tyr Leu Val Pro Asp Asn Ser Gln Arg Gln Lys Gln Gln Lys Ile
 260 265 270
 Leu Thr Leu Phe Tyr Ser Leu Phe Asn Pro Leu Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Ala Gln Val Lys Gly Ala Leu Tyr Arg Ala Leu
 290 295 300
 Gln Lys Lys Arg Thr Met
 305 310

<210> 486
 <211> 933
 <212> DNA
 <213> Homo sapiens

<400> 486
 atgggggaca accaatcacg gggtcacagaa ttcattcctgg ttggattcca gctcagtgtg 60
 gagatggaag tgctcctctt ctggatcttc tccctgttat atctcttcag cctgctggca 120
 aatggcatga tcttggggct catctgtctg gatcccagac tgcgcacccc catgtacttc 180
 ttcctgtcac acttggccgt cattgacata tactatgctt ccagcaattt gctcaacatg 240
 ctggaaaacc tagtgaaaca caaaaaaact atctcgttca tctcttgcat tatgcagatg 300
 gctttgtatt tgacttttgc tgctgcagtg tgcattgatt tgggtggtgat gtcctatgac 360
 agatttgggg cgatctgcca tcccctgcat tacactgtca tcatgaactg gagagtgtgc 420
 acagtactgg ctattacttc ctgggcatgt ggattttccc tggccctcat aaatctaatt 480
 ctctttctaa ggctgccctt ctgtgggccc caggaggtga accacttctt cggtgaaatt 540
 ctgtctgtcc tcaaactggc ctgtgcagac acctggatta atgaaatttt tgtctttgct 600
 ggtggtgtgt ttgtcttagt cgggcccctt tccttgatgc tgatctccta catgcgcac 660
 ctcttggcca tcttgaagat ccagtcaaag gagggccgca aaaaagcctt ttccacctgc 720
 tcctcccacc tctgtgtggt tgggctttac tttggcatgg ccatggtggt ttacctgggc 780
 ccagacaaca gtcaacgcga gaagcagcag aaaattctca ccctgtttta cagccttttc 840
 aaccatttgc tgaaccccct catctacagc ctgcggaatg ctcaagtga ggggtgcctta 900
 tacagagcac tgcagaaaaa gaggaccatg tga 933

<210> 487
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 487
 Met Pro Ser Ile Asn Asp Thr His Phe Tyr Pro Pro Phe Phe Leu Leu
 1 5 10 15

Leu Gly Ile Pro Gly Leu Asp Thr Leu His Ile Trp Ile Ser Phe Pro
 20 25 30
 Phe Cys Ile Val Tyr Leu Ile Ala Ile Val Gly Asn Met Thr Ile Leu
 35 40 45
 Phe Val Ile Lys Thr Glu His Ser Leu His Gln Pro Met Phe Tyr Phe
 50 55 60
 Leu Ala Met Leu Ser Met Ile Asp Leu Gly Leu Ser Thr Ser Thr Ile
 65 70 75 80
 Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Leu Gln Glu Ile Ser Phe
 85 90 95
 Gly Gly Cys Leu Leu Gln Met Phe Phe Ile His Met Phe Thr Gly Met
 100 105 110
 Glu Thr Val Leu Leu Val Val Met Ala Tyr Asp Arg Phe Val Ala Ile
 115 120 125
 Cys Asn Pro Leu Gln Tyr Thr Met Ile Leu Thr Asn Lys Thr Ile Ser
 130 135 140
 Ile Leu Ala Ser Val Val Val Gly Arg Asn Leu Val Leu Val Thr Pro
 145 150 155 160
 Phe Val Phe Leu Ile Leu Arg Leu Pro Phe Cys Gly His Asn Ile Val
 165 170 175
 Pro His Thr Tyr Cys Glu His Arg Gly Leu Ala Gly Leu Ala Cys Ala
 180 185 190
 Pro Ile Lys Ile Asn Ile Ile Tyr Gly Leu Met Val Ile Ser Tyr Ile
 195 200 205
 Ile Val Asp Val Ile Leu Ile Ala Ser Ser Tyr Val Leu Ile Leu Arg
 210 215 220
 Ala Val Phe Arg Leu Pro Ser Gln Asp Val Arg Leu Lys Ala Phe Asn
 225 230 235 240
 Thr Cys Gly Ser His Val Cys Val Met Leu Cys Phe Tyr Thr Pro Ala
 245 250 255
 Phe Phe Ser Phe Met Thr His Arg Phe Gly Gln Asn Ile Pro His Tyr
 260 265 270
 Ile His Ile Leu Leu Ala Asn Leu Tyr Val Val Val Pro Pro Ala Leu
 275 280 285
 Asn Pro Val Ile Tyr Gly Val Arg Thr Lys Gln Ile Arg Glu Gln Ile
 290 295 300
 Val Lys Ile Phe Val Gln Lys Glu
 305 310

<210> 488

<211> 939

<212> DNA
<213> Homo sapiens

<400> 488
atgccttcta tcaatgacac ccacttctat ccccccttct tcctcctgct aggaataacca 60
ggactggaca cttttacatat ctggatttct ttcccattct gtattgtgta cctgattgcc 120
attgtgggga atatgaccat tctctttgtg atcaaaactg aacatagtct acaccagccc 180
atgttctact tcctggccat gttgtctatg attgatctgg gtctgtccac atccactatc 240
cccaaaatgc taggaatctt ctggttcaac ctccaagaga tcagctttgg gggatgcctt 300
cttcagatgt tctttattca catgtttaca ggcattggaga ctgttctgtt ggtgggtcatg 360
gcttatgacc gctttgttgc catctgcaac cctctccagt acaccatgat cctcaccaat 420
aaaacatca gtatcctagc ttctgtgggt gttggaagaa atttagttct tgtaacccca 480
tttgtgtttc tcattctgcg tctgccattc tgtgggcata acatcgtacc tcacacatac 540
tgtgagcaca ggggtctggc cgggttggcc tgtgcaccca ttaagatcaa cataatctat 600
gggctcatgg tgatttctta tattattgtg gatgtgatct taattgctc ttcctatgtg 660
cttatcctta gagctgtttt tcgccttccc tctcaagatg tccgactaaa ggccttcaat 720
acctgtgggt ctcatgtctg tgttatgctg tgcttttaca caccagcatt tttttctttt 780
atgacacatc gttttggcca aaacattccc cactatatcc atattctttt ggctaacctg 840
tatgtggttg tcccacctgc ccttaaccct gtcatttatg gagtcaggac caagcagatc 900
cgagagcaaa ttgtgaaaat atttgtacag aaagaataa 939

<210> 489
<211> 327
<212> PRT
<213> Homo sapiens

<400> 489
Met Leu His Thr Asn Asn Thr Gln Phe His Pro Ser Thr Phe Leu Val
1 5 10 15
Val Gly Val Pro Gly Leu Glu Asp Val His Val Trp Ile Gly Phe Pro
20 25 30
Phe Phe Ala Val Tyr Leu Thr Ala Leu Leu Gly Asn Ile Ile Ile Leu
35 40 45
Phe Val Ile Gln Thr Glu Gln Ser Leu His Gln Pro Met Phe Tyr Phe
50 55 60
Leu Ala Met Leu Ala Gly Thr Asp Leu Gly Leu Ser Thr Ala Thr Ile
65 70 75 80
Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Leu Gly Glu Ile Ala Phe
85 90 95
Gly Ala Cys Ile Thr Gln Met Tyr Thr Ile His Ile Cys Thr Gly Leu
100 105 110
Glu Ser Val Val Leu Thr Val Thr Gly Ile Asp Arg Tyr Ile Ala Ile
115 120 125
Cys Asn Pro Leu Arg Tyr Ser Met Ile Leu Thr Asn Lys Val Ile Ala
130 135 140
Ile Leu Gly Ile Val Ile Ile Val Arg Thr Leu Val Phe Val Thr Pro
145 150 155 160
Phe Thr Phe Leu Thr Leu Arg Leu Pro Phe Cys Gly Val Arg Ile Ile
165 170 175

Pro His Thr Tyr Cys Glu His Met Gly Leu Ala Lys Leu Ala Cys Ala
180 185 190

Ser Ile Asn Val Ile Tyr Gly Leu Ile Ala Phe Ser Val Gly Tyr Ile
195 200 205

Asp Ile Ser Val Ile Gly Phe Ser Tyr Val Gln Ile Leu Arg Ala Val
210 215 220

Phe His Leu Pro Ala Trp Asp Ala Arg Leu Lys Ala Leu Ser Thr Cys
225 230 235 240

Gly Ser His Val Cys Val Met Leu Ala Phe Tyr Leu Pro Ala Leu Phe
245 250 255

Ser Phe Met Thr His Arg Phe Gly His Asn Ile Pro His Tyr Ile His
260 265 270

Ile Leu Leu Ala Asn Leu Tyr Val Val Phe Pro Pro Ala Leu Asn Ser
275 280 285

Val Ile Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Gln Val Leu Arg
290 295 300

Ile Leu Asn Pro Lys Ser Phe Trp His Phe Asp Pro Lys Arg Ile Phe
305 310 315 320

His Asn Asn Ser Val Arg Gln
325

<210> 490
<211> 984
<212> DNA
<213> Homo sapiens

<400> 490
atgcttcata ccaacaatac acagtttcac ccttccacct tctctgtagt ggggggtccca 60
gggctggaag atgtgcatgt atggattggc ttcccccttct ttgcggtgta tctaacagcc 120
cttctaggga acatcattat cctgtttgtg atacagactg aacagagcct ccaccaaccc 180
atgttttact tctagccat gttggccggc actgatctgg gcttgtctac agcaaccatc 240
cccaagatgc tgggaatttt ctgggtttaat cttggagaga ttgcatttgg tgctgcatc 300
acacagatgt ataccattca tatatgcact ggcctggagt ctgtggtact gacagtcacg 360
ggcatagatc gctatattgc catctgcaac cccctgagat atagcatgat ccttaccaac 420
aaggtaatag ccattctggg catagtcatc attgtcagga ctttggtatt tgtgactcca 480
ttcacatttc tcaccctgag attgcctttc tgtggtgtcc ggattatccc tcatacctat 540
tgtgaacaca tgggcttggc aaagttagct tgtgccagta ttaatgttat atatggattg 600
attgccttct cagtgggata cattgacatt tctgtgattg gattttccta tgtccagatc 660
ctccgagctg tcttccatct ccagcctgg gatgccggc ttaaggcact cagcacatgt 720
ggctctcacg tctgtgttat gttggctttc tacctgccag ccctcttttc cttcatgaca 780
caccgctttg gccacaacat ccctcattac atccacattc ttctggccaa tctgtatgtg 840
gtttttcccc ctgctcttaa ctctgttatc tatggggtca aaacaaaaca gatacgagag 900
caggtactta ggatactcaa ccctaaaagc ttttggcatt ttgaccccaa gaggatcttc 960
cacaacaatt cagttagaca ataa 984

<210> 491
<211> 309
<212> PRT
<213> Homo sapiens

<400> 491

Met Lys Asn Lys Thr Val Leu Thr Glu Phe Ile Leu Leu Gly Leu Thr
1 5 10 15

Asp Val Pro Glu Leu Gln Val Ala Val Phe Thr Phe Leu Phe Leu Ala
20 25 30

Tyr Leu Leu Ser Ile Leu Gly Asn Leu Thr Ile Leu Ile Leu Thr Leu
35 40 45

Leu Asp Ser His Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg Asn Phe
50 55 60

Ser Phe Leu Glu Ile Ser Phe Thr Asn Ile Phe Ile Pro Arg Val Leu
65 70 75 80

Ile Ser Ile Thr Thr Gly Asn Lys Ser Ile Ser Phe Ala Gly Cys Phe
85 90 95

Thr Gln Tyr Phe Phe Ala Met Phe Leu Gly Ala Thr Glu Phe Tyr Leu
100 105 110

Leu Ala Ala Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Thr Thr Ile Met Ser Ser Arg Ile Cys Ile Gln Leu Ile Phe
130 135 140

Cys Ser Trp Leu Gly Gly Leu Met Ala Ile Ile Pro Thr Ile Thr Leu
145 150 155 160

Met Ser Gln Gln Asp Phe Cys Ala Ser Asn Arg Leu Asn His Tyr Phe
165 170 175

Cys Asp Tyr Glu Pro Leu Leu Glu Leu Ser Cys Ser Asp Thr Ser Leu
180 185 190

Ile Glu Lys Val Val Phe Leu Val Ala Ser Val Thr Leu Val Val Thr
195 200 205

Leu Val Leu Val Ile Leu Ser Tyr Ala Phe Ile Ile Lys Thr Ile Leu
210 215 220

Lys Leu Pro Ser Ala Gln Gln Arg Thr Lys Ala Phe Ser Thr Cys Ser
225 230 235 240

Ser His Met Ile Val Ile Ser Leu Ser Tyr Gly Ser Cys Met Phe Met
245 250 255

Tyr Ile Asn Pro Ser Ala Lys Glu Gly Asp Thr Phe Asn Lys Gly Val
260 265 270

Ala Leu Leu Ile Thr Ser Val Ala Pro Leu Leu Asn Pro Phe Ile Tyr
275 280 285

Thr Leu Arg Asn Gln Gln Val Lys Gln Pro Phe Lys Asp Met Val Lys
290 295 300

Lys Leu Leu Asn Leu
305

<210> 492
<211> 930
<212> DNA
<213> Homo sapiens

<400> 492
atgaaaaata aaaccgtggt aactgagttt atccttctgg gtctaacaga tgtccctgaa 60
ctccagggtgg cagttttcac ctttcttttc cttgcgtatt tactcagcat ccttggaaat 120
ctgactatcc tcacccctcac cttgctggac tcccaccttc agactcccat gtatttcttt 180
ctccggaact tctccttctt ggaaatttcc ttcacaaaca tcttcattcc aagggtcctg 240
attagcatca caacaggga caagagtatc agctttgctg gctgcttcac tcagtatttc 300
tttgccatgt tccttggggc tacagagttt taccttctgg ctgccatgtc ctatgaccgc 360
tatgtggcca tctgcaaacc tctgcattac accaccatca tgagcagcag aatctgcata 420
cagctgattt tctgctcttg gctgggtggg ctaatggcta ttataccaac aatcaccttg 480
atgagtcagc aggacttttg tgcattccaac agactgaatc attacttctg tgactatgag 540
cctcttctgg aactctcatg ttcagacaca agcctcatag agaagggtgt ctttcttctg 600
gcatctgtga ccctgggtgt cactctggtg ctagtgattc tctcctatgc attcattatc 660
aagactattc tgaagctccc ctctgccccaa caaaggacaa aagccttttc cacatgttct 720
tcccacatga ttgtcatctc cctctcttac ggaagctgca tgtttatgta cattaatccc 780
tctgcaaaag aaggggatac attcaacaag ggagtagctc tactcattac ttcagttgct 840
cctttgttga acccctttat ttacacccta aggaaccaac aggtaaaaca acccttcaag 900
gatatggtca aaaagcttct gaatctttta 930

<210> 493
<211> 317
<212> PRT
<213> Homo sapiens

<400> 493
Met Glu Gly Lys Asn Gln Thr Ala Pro Ser Glu Phe Ile Ile Leu Gly
1 5 10 15
Phe Asp His Leu Asn Glu Leu Gln Tyr Leu Leu Phe Thr Ile Phe Phe
20 25 30
Leu Thr Tyr Ile Cys Thr Leu Gly Gly Asn Val Phe Ile Ile Val Val
35 40 45
Thr Ile Ala Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Gly
50 55 60
Asn Leu Ala Leu Ile Asp Ile Cys Tyr Thr Thr Thr Asn Val Pro Gln
65 70 75 80
Met Met Val His Leu Leu Ser Glu Lys Lys Ile Ile Ser Tyr Gly Gly
85 90 95
Cys Val Thr Gln Leu Phe Ala Phe Ile Phe Phe Val Gly Ser Glu Cys
100 105 110
Leu Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Lys
115 120 125
Pro Leu Arg Tyr Ser Phe Ile Met Asn Lys Ala Leu Cys Ser Trp Leu
130 135 140
Ala Ala Ser Cys Trp Thr Cys Gly Phe Leu Asn Ser Val Leu His Thr
145 150 155 160

Val Leu Thr Phe His Leu Pro Phe Cys Gly Asn Asn Gln Ile Asn Tyr
 165 170 175
 Phe Phe Cys Asp Ile Pro Pro Leu Leu Ile Leu Ser Cys Gly Asp Thr
 180 185 190
 Ser Leu Asn Glu Leu Ala Leu Leu Ser Ile Gly Ile Leu Ile Ser Trp
 195 200 205
 Thr Pro Phe Leu Cys Ile Ile Leu Ser Tyr Leu Tyr Ile Ile Ser Thr
 210 215 220
 Ile Leu Arg Ile Arg Ser Ser Glu Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Leu Ile Val Ile Leu Tyr Tyr Gly Ser Ala Ile
 245 250 255
 Phe Thr Tyr Val Arg Pro Ile Ser Ser Tyr Ser Leu Glu Lys Asp Arg
 260 265 270
 Leu Ile Ser Val Leu Tyr Ser Val Val Thr Pro Met Leu Asn Pro Val
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Asp Ile Lys Glu Ala Val Lys Ala Ile
 290 295 300
 Gly Arg Lys Trp Gln Pro Pro Val Phe Ser Ser Asp Ile
 305 310 315

<210> 494
 <211> 954
 <212> DNA
 <213> Homo sapiens

<400> 494
 atggaaggaa agaatcaaac agctccatct gaattcatca tcttgggggt cgaccacctg 60
 aatgaattgc agtattttact cttcaccatc ttctttctga cctacatatg cacttttagga 120
 ggcaatggtt ttatcattgt ggtgaccata gctgattccc acctacacac acctatgtat 180
 tatttcctag gaaatcctgc ccttattgac atctgctaca ctactactaa tgtccccag 240
 atgatggtgc atcttctgtc agagaagaaa atcatttctt atggaggctg tgtgaccag 300
 ctctttgcat tcattttctt tgttggtcga gagtgtctcc tctggcagc aatggcatat 360
 gatcgatata ttgctatctg taagccgtta aggtactcat ttattatgaa caaggccctg 420
 tgcagctggt tagcagcctc atgctggaca tgtgggttcc tcaactcagt gttgcacacc 480
 gttctgacct tccacctgcc cttctgtggt aacaatcaga tcaattattt cttctgtgac 540
 atacctccct tgctcatctt gtcttgtggt gatacttccc tcaatgaact ggctttgctg 600
 tccattggga tcttcataag ctggactcct ttctgtgca tcatcctttc ctacctttac 660
 atcatctcca ccatcctgag gatccgttcc tctgagggga ggcacaaagc cttttccacc 720
 tgtgctccc acctgctcat tgttattctc tattatggca gtgctatctt cacgtatgtg 780
 aggcccatct catcttactc tctagagaaa gatagattga tctcagtgtc gtatagtgtt 840
 gtcacaccca tgctgaatcc tgtaatttat acgctaagga ataaggacat caaaggaggt 900
 gtgaaggcca tagggagaaa gtggcagcca ccagttttct cttctgatat ataa 954

<210> 495
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 495

Met	Ala	Arg	Lys	Asp	Met	Ala	His	Ile	Asn	Cys	Thr	Gln	Ala	Thr	Glu	1	5	10	15
Phe	Ile	Leu	Val	Gly	Leu	Thr	Asp	His	Gln	Glu	Leu	Lys	Met	Pro	Leu	20	25	30	
Phe	Val	Leu	Phe	Leu	Ser	Ile	Tyr	Leu	Phe	Thr	Val	Val	Gly	Asn	Leu	35	40	45	
Gly	Leu	Ile	Leu	Leu	Ile	Arg	Ala	Asp	Thr	Ser	Leu	Asn	Thr	Pro	Met	50	55	60	
Tyr	Phe	Phe	Leu	Ser	Asn	Leu	Ala	Phe	Val	Asp	Phe	Cys	Tyr	Ser	Ser	65	70	75	80
Val	Ile	Thr	Pro	Lys	Met	Leu	Gly	Asn	Phe	Leu	Tyr	Lys	Gln	Asn	Val	85	90	95	
Ile	Ser	Phe	Asp	Ala	Cys	Ala	Thr	Gln	Leu	Gly	Cys	Phe	Leu	Thr	Phe	100	105	110	
Met	Ile	Ser	Glu	Ser	Leu	Leu	Leu	Ala	Ser	Met	Ala	Tyr	Asp	Arg	Tyr	115	120	125	
Val	Ala	Ile	Cys	Asn	Pro	Leu	Leu	Tyr	Met	Val	Val	Met	Thr	Pro	Gly	130	135	140	
Ile	Cys	Ile	Gln	Leu	Val	Ala	Val	Pro	Tyr	Ser	Tyr	Ser	Phe	Leu	Met	145	150	155	160
Ala	Leu	Phe	His	Thr	Ile	Leu	Thr	Phe	Arg	Leu	Ser	Tyr	Cys	His	Ser	165	170	175	
Asn	Ile	Val	Asn	His	Phe	Tyr	Cys	Asp	Asp	Met	Pro	Leu	Leu	Arg	Leu	180	185	190	
Thr	Cys	Ser	Asp	Thr	Arg	Phe	Lys	Gln	Leu	Trp	Ile	Phe	Ala	Cys	Ala	195	200	205	
Gly	Ile	Met	Phe	Ile	Ser	Ser	Leu	Leu	Ile	Val	Phe	Val	Ser	Tyr	Met	210	215	220	
Phe	Ile	Ile	Ser	Ala	Ile	Leu	Arg	Met	His	Ser	Ala	Glu	Gly	Arg	Gln	225	230	235	240
Lys	Ala	Phe	Ser	Thr	Cys	Gly	Ser	His	Met	Leu	Ala	Val	Thr	Ile	Phe	245	250	255	
Tyr	Gly	Thr	Leu	Ile	Phe	Met	Tyr	Leu	Gln	Pro	Ser	Ser	Ser	His	Ala	260	265	270	
Leu	Asp	Thr	Asp	Lys	Met	Ala	Ser	Val	Phe	Tyr	Thr	Val	Ile	Ile	Pro	275	280	285	
Met	Leu	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Gln	Asn	Lys	Glu	Val	Lys	Glu	290	295	300	
Ala	Leu	Lys	Lys	Ile	Ile	Ile	Asn	Lys	Asn	305	310								

<210> 496
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 496
 atggccagaa aagatatggc tcacatcaat tgcacccagg cgacagagtt tattcttgtg 60
 ggccctcacag accatcagga gttgaagatg cccctctttg tgctattctt atccatctac 120
 ctcttcacag tggtaggcaa cttggggtttg atcctactca ttagagcgga tacaagtctc 180
 aacacaccaa tgtacttctt tcttagcaac ctagcttttg tggatttctg ttactcttct 240
 gtcattacac ccaaaatgct tgggaatttc ttgtacaaac aaaatgttat atcctttgat 300
 gcatgtgcta ctcaactggg ctgctttctc accttcatga tatcagaatc cttgctactg 360
 gcttccatgg cctatgaccg atatgtggcc atttgtaacc ctctattgta tatggttgta 420
 atgactccag gaatctgcat tcaacttgta gcagttcctt atagctatag cttcctaatag 480
 gcactatttc acaccatcct caccttccgc ctctcctatt gccactccaa cattgtcaac 540
 catttctatt gtgatgacat gcctctctc aggctaactt gctcagacac tcgcttcaaa 600
 cagctctgga tctttgcctg tgctgggtatc atgttcattt cctcccttct gattgtcttt 660
 gtctcctaca tgttcatcat ttctgccatc ctgaggatgc attcagctga gggaagacag 720
 aaggctttct cgacgtgtgg ctctcacatg ctggcagtca ccatattcta tgggaccctc 780
 atttttatgt acttacagcc tagctctagc catgccctgg acacagacaa gatggcctct 840
 gtcttctaca cagtgatcat tcccatgttg aatcccttaa tctatagcct ccagaataag 900
 gaggtgaaag aagctctgaa gaaaatcatt atcaataaaa actag 945

<210> 497
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 497
 Met Ala Glu Val Asn Ile Ile Tyr Val Thr Val Phe Ile Leu Lys Gly
 1 5 10 15
 Ile Thr Asn Arg Pro Glu Leu Gln Ala Pro Cys Phe Gly Val Phe Leu
 20 25 30
 Val Ile Tyr Leu Val Thr Val Leu Gly Asn Leu Gly Leu Ile Thr Leu
 35 40 45
 Ile Lys Ile Asp Thr Arg Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
 50 55 60
 His Leu Ala Phe Val Asp Leu Cys Tyr Ser Ser Ala Ile Thr Pro Lys
 65 70 75 80
 Met Met Val Asn Phe Val Val Glu Arg Asn Thr Ile Pro Phe His Ala
 85 90 95
 Cys Ala Thr Gln Leu Gly Cys Phe Leu Thr Phe Met Ile Thr Glu Cys
 100 105 110
 Phe Leu Leu Ala Ser Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys Ser
 115 120 125
 Pro Leu His Tyr Ser Thr Leu Met Ser Arg Arg Val Cys Ile Gln Leu
 130 135 140
 Val Ala Val Pro Tyr Ile Tyr Ser Phe Leu Val Ala Leu Phe His Thr
 145 150 155 160
 Val Ile Thr Phe Arg Leu Thr Tyr Cys Gly Pro Asn Leu Ile Asn His

165	170	175
Phe Tyr Cys Asp Asp Leu Pro Phe Leu Ala Leu Ser Cys Ser Asp Thr		
180	185	190
His Met Lys Glu Ile Leu Ile Phe Ala Phe Ala Gly Phe Asp Met Ile		
195	200	205
Ser Ser Ser Ser Ile Val Leu Thr Ser Tyr Ile Phe Ile Ile Ala Ala		
210	215	220
Ile Leu Arg Ile Arg Ser Thr Gln Gly Gln His Lys Ala Ile Ser Thr		
225	230	235
Cys Gly Ser His Met Val Thr Val Thr Ile Phe Tyr Gly Thr Leu Ile		
245	250	255
Phe Met Tyr Leu Gln Pro Lys Ser Asn His Ser Leu Asp Thr Asp Lys		
260	265	270
Met Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Ser Lys Lys Ala		
290	295	300
Leu Asp Lys Gly Cys Glu Asn Leu Gln Ile Leu Thr Phe Leu Lys Ile		
305	310	315
		320

Arg Lys Leu Tyr

<210> 498
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 498

atggctgaag	ttaatatcat	ttatgtcact	gtattcattc	tgaaaggaat	taccaaccgg	60
ccagagcttc	aggccccgtg	ctttgggggtg	tttttagtta	tctatctggt	cacagtgtg	120
ggcaatcttg	ggttgattac	tttaatcaag	attgatactc	gactccacac	acctatgtac	180
tatttccctca	gccacctggc	ctttgttgac	ctttgttact	cctctgctat	tacaccgaag	240
atgatggtga	attttgttgt	ggaacgcaac	accattcctt	tccatgcttg	tgcaacccaa	300
ctgggttgtt	ttctcacctt	catgatcact	gagtgtttcc	ttctagcctc	catggcctac	360
gattgctatg	tcgccatctg	tagtccccctg	cattattcaa	cactgatgtc	aagaagagtc	420
tgcattcaac	tggtggcagt	tccatatata	tacagcttcc	tggttgccct	cttccacacc	480
gttatcactt	tccgtctgac	ttactgtggc	ccaaacttaa	ttaaccattt	ctatttgtat	540
gacctccctt	tcttagctct	gtcctgctca	gacacacaca	tgaaggaaat	tctgatattt	600
gcctttgctg	gctttgatat	gatctcttcc	tcttccattg	tcctcacctc	ctacatcttt	660
attattgccg	ctatcctaag	gatccgctct	actcaggggc	aacacaaagc	catttccacc	720
tgtggctccc	atatggtgac	tgctactatt	ttctatggca	cactgatctt	tatgtacct	780
cagcccaa	caaatactc	cttggacaca	gacaagatgg	cttctgtatt	ttacacagtg	840
gtgatcccca	tgtaaacc	cctaatactat	agtctaagga	aaaagaagt	gaaagatgcc	900
tcaaagaaag	ccttgataa	aggttgtgaa	aacttacaga	tattaacatt	tttaaaaaata	960
agaaaacttt	attaa					975

<210> 499
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 499

Met Lys Asn Arg Thr Met Phe Gly Glu Phe Ile Leu Leu Gly Leu Thr
1 5 10 15

Asn Gln Pro Glu Leu Gln Val Met Ile Phe Ile Phe Leu Phe Leu Thr
20 25 30

Tyr Met Leu Ser Ile Leu Gly Asn Leu Thr Ile Ile Thr Leu Thr Leu
35 40 45

Leu Asp Pro His Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg Asn Phe
50 55 60

Ser Phe Leu Glu Ile Ser Phe Thr Ser Ile Phe Ile Pro Arg Phe Leu
65 70 75 80

Thr Ser Met Thr Thr Gly Asn Lys Val Ile Ser Phe Ala Gly Cys Leu
85 90 95

Thr Gln Tyr Phe Phe Ala Ile Phe Leu Gly Ala Thr Glu Phe Tyr Leu
100 105 110

Leu Ala Ser Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Leu Thr Ile Met Ser Ser Arg Val Cys Ile Gln Leu Val Phe
130 135 140

Cys Ser Trp Leu Gly Gly Phe Leu Ala Ile Leu Pro Pro Ile Ile Leu
145 150 155 160

Met Thr Gln Val Asp Phe Cys Val Ser Asn Ile Leu Asn His Tyr Tyr
165 170 175

Cys Asp Tyr Gly Pro Leu Val Glu Leu Ala Cys Ser Asp Thr Ser Leu
180 185 190

Leu Glu Leu Met Val Ile Leu Leu Ala Val Val Thr Leu Met Val Thr
195 200 205

Leu Val Leu Val Thr Leu Ser Tyr Thr Tyr Ile Ile Arg Thr Ile Leu
210 215 220

Arg Ile Pro Ser Ala Gln Gln Arg Thr Lys Ala Phe Ser Thr Cys Ser
225 230 235 240

Ser His Met Ile Val Ile Ser Leu Ser Tyr Gly Ser Cys Met Phe Met
245 250 255

Tyr Ile Asn Pro Ser Ala Lys Glu Gly Gly Ala Phe Asn Lys Gly Ile
260 265 270

Ala Val Leu Ile Thr Ser Val Thr Pro Leu Leu Asn Pro Phe Ile Tyr
275 280 285

Thr Leu Arg Asn Gln Gln Val Lys Gln Ala Phe Lys Asp Ser Val Lys
290 295 300

Lys Ile Val Lys Leu
305

<210> 500
<211> 930
<212> DNA
<213> Homo sapiens

<400> 500
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ctccaagtga tgatattcat ctttctgttc ctcacctaca tgctaagtat cctaggaaat 120
ctgactatta tcaccctcac cttactagac cccacacctc agacccccat gtatttcttc 180
ctccggaatt tctccttctt agaaatttcc ttcacatcca tttttattcc cagatttctg 240
accagcatga caacaggaaa taaagttatc agctttgctg gctgcttgac tcagtatttt 300
tttgctatat ttcttgagc taccgagttt tacctcctgg cctccatgtc ttatgatcgt 360
tatgtggcca tctgcaaacc cttgcattac ctgactatta tgagcagcag agtctgcata 420
caactagtgt tctgctcctg gttgggggga ttcctagcaa tcttaccacc aatcatcctg 480
atgaccagg tagatttctg tgtctccaac attctgaatc actattactg tgactatggg 540
cctctcgtgg agcttgctg ctcagacaca agcctcttag aactgatggg catcctcttg 600
gccgttggtga ctctcatggt tactctggtg ctgggtgacac tttcttacac atacattatc 660
aggactattc tgaggatccc ttctgcccag caaaggacaa aggccttttc cacttggttc 720
tcccacatga ttgtcatctc cctctcttat ggcagctgca tgtttatgta cattaatcct 780
tctgcaaaag aaggaggtgc tttcaacaaa ggaatagctg tactcattac ttcggttact 840
cccttactga atcccttcat atatacttta agaaatcagc aagtgaaaca agctttcaag 900
gactcagtca aaaagattgt gaaacttta 930

<210> 501
<211> 305
<212> PRT
<213> Homo sapiens

<400> 501
Met Glu Phe Val Phe Leu Ala Tyr Pro Ser Cys Pro Glu Leu His Ile
1 5 10 15
Leu Ser Phe Leu Gly Val Ser Leu Val Tyr Gly Leu Ile Ile Thr Gly
20 25 30
Asn Ile Leu Ile Val Val Ser Ile His Thr Glu Thr Cys Leu Cys Thr
35 40 45
Ser Met Tyr Tyr Phe Leu Gly Ser Leu Ser Gly Ile Glu Ile Cys Tyr
50 55 60
Thr Ala Val Val Val Pro His Ile Leu Ala Asn Thr Leu Gln Ser Glu
65 70 75 80
Lys Thr Ile Thr Leu Leu Gly Cys Ala Thr Gln Met Ala Phe Phe Ile
85 90 95
Ala Leu Gly Ser Ala Asp Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp
100 105 110
Arg Tyr Val Ala Ile Cys His Pro Leu Gln Tyr Pro Leu Leu Met Thr
115 120 125
Leu Thr Leu Cys Val His Leu Val Val Ala Ser Val Ile Ser Gly Leu
130 135 140
Phe Leu Ser Leu Gln Leu Val Ala Phe Ile Phe Ser Leu Pro Phe Cys
145 150 155 160

Gln Ala Gln Gly Ile Glu His Phe Phe Cys Asp Val Pro Pro Val Met
 165 170 175
 His Val Val Cys Ala Gln Ser His Ile His Glu Gln Ser Val Leu Val
 180 185 190
 Ala Ala Ile Leu Ala Ile Ala Val Pro Phe Phe Leu Ile Thr Thr Ser
 195 200 205
 Tyr Thr Phe Ile Val Ala Ala Leu Leu Lys Ile His Ser Ala Ala Gly
 210 215 220
 Arg His Arg Ala Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Leu
 225 230 235 240
 Leu Gln Tyr Gly Cys Cys Ala Phe Met Tyr Leu Cys Pro Ser Ser Ser
 245 250 255
 Tyr Asn Pro Lys Gln Asp Arg Phe Ile Ser Leu Val Tyr Thr Leu Gly
 260 265 270
 Thr Pro Leu Leu Asn Pro Leu Ile Tyr Ala Leu Arg Asn Ser Glu Met
 275 280 285
 Lys Gly Ala Val Gly Arg Val Leu Thr Arg Asn Cys Leu Ser Gln Asn
 290 295 300

Ser
 305

<210> 502
 <211> 918
 <212> DNA
 <213> Homo sapiens

<400> 502
 atggaatttg tgttcctggc ctatccctcc tgcccagaac tgcattattct gtccttcctt 60
 ggggtcagcc tgggtttatgg tttgatcatc actgggaaca ttctcattgt ggtgtccatt 120
 cacacagaaa cctgtctatg cacatccatg tactatttcc tgggcagcct ttctgggatt 180
 gaaatattgct acactgcagt ggtgggtgcc catatcctgg ccaacaccct acagtcagag 240
 aagaccatca ctctcctggg ctgtgccacc cagatggctt tcttcattgc actgggcagt 300
 gctgattgct tctctttggc tgccatggcc tatgaccgct atgtggccat ttgccacccg 360
 ttgcagtacc ctctcctcat gacattgact ctttgtgtcc acttggttgt ggcattcagtc 420
 atcagtggtc tgttcctgtc cttacaactg gtggccttca tcttctctct gccattctgc 480
 caggctcagg gcattgagca cttcttttgt gatgtgccac cagtcattgca tgttgtttgt 540
 gctcagagtc acattcatga gcagtcagt ctggtggcag ccatactagc cattgctgtg 600
 cttttcttcc tcatcaccac ctctacacc ttcatagtgg ctgctctgct caagatccac 660
 tcggctgctg gccgccaccg ggcccttctc acctgctctt cccacctcac tgtgggtgctg 720
 ctgcagtatg gctgctgtgc cttcatgtac ctgtgcccc gctccagcta caaccccaag 780
 caagatcggt tcatctcact ggtgtacaca ttgggaaccc cactgctcaa cccacttatc 840
 tatgccctga ggaacagtga gatgaaagg gccgtaggga gagttcttac caggaactgc 900
 ctttcccaga acagctag 918

<210> 503
 <211> 295
 <212> PRT
 <213> Homo sapiens

<400> 503

Met	Gly	Gly	Phe	Gly	Thr	Asn	Ile	Ser	Ser	Thr	Thr	Ser	Phe	Thr	Leu
1				5					10					15	
Thr	Gly	Phe	Pro	Glu	Met	Lys	Gly	Leu	Glu	His	Trp	Leu	Ala	Ala	Leu
			20					25					30		
Leu	Leu	Leu	Leu	Tyr	Ala	Ile	Ser	Phe	Leu	Gly	Asn	Ile	Leu	Ile	Leu
		35					40					45			
Phe	Ile	Ile	Lys	Glu	Glu	Gln	Ser	Leu	His	Gln	Pro	Met	Tyr	Tyr	Phe
	50					55					60				
Leu	Ser	Leu	Phe	Ser	Val	Asn	Asp	Leu	Gly	Val	Ser	Phe	Ser	Thr	Leu
65					70					75					80
Pro	Thr	Val	Leu	Ala	Ala	Val	Cys	Phe	His	Ala	Pro	Glu	Thr	Thr	Phe
				85					90					95	
Asp	Ala	Cys	Leu	Ala	Gln	Met	Phe	Phe	Ile	His	Phe	Ser	Ser	Trp	Thr
			100					105					110		
Glu	Phe	Gly	Ile	Leu	Leu	Ala	Met	Ser	Phe	Asp	His	Tyr	Val	Ala	Ile
		115					120					125			
Cys	Asn	Pro	Leu	Arg	Tyr	Ala	Thr	Val	Leu	Thr	Asp	Val	Arg	Val	Ala
	130					135					140				
His	Asn	Gly	Ile	Ser	Ile	Val	Ile	Arg	Ser	Phe	Cys	Met	Val	Phe	Pro
145					150					155					160
Leu	Pro	Phe	Leu	Leu	Lys	Arg	Leu	Pro	Phe	Cys	Lys	Ala	Ser	Val	Val
			165						170					175	
Leu	Ala	His	Ser	Tyr	Cys	Leu	His	Ala	Asp	Leu	Ile	Arg	Leu	Pro	Trp
			180					185					190		
Gly	Asp	Thr	Thr	Ile	Asn	Ser	Met	Tyr	Gly	Leu	Phe	Ile	Val	Ile	Ser
		195					200					205			
Ala	Phe	Gly	Val	Asp	Ser	Leu	Leu	Ile	Leu	Leu	Ser	Tyr	Val	Leu	Ile
	210					215					220				
Leu	His	Ser	Val	Leu	Ala	Ile	Ala	Ser	Arg	Gly	Glu	Arg	Leu	Lys	Thr
225					230					235					240
Leu	Asn	Thr	Cys	Val	Ser	His	Ile	Tyr	Ala	Val	Leu	Ile	Phe	Tyr	Val
				245					250					255	
Pro	Met	Val	Ser	Val	Ser	Met	Val	His	Arg	Phe	Gly	Arg	His	Ala	Pro
			260					265					270		
Glu	Tyr	Val	His	Lys	Phe	Met	Ser	Leu	Cys	Thr	Ser	Asn	Ala	Leu	Pro
		275					280					285			
Asn	Tyr	Leu	Phe	His	Gln	Asp									
	290					295									

<210> 504

<211> 888

<212> DNA
<213> Homo sapiens

<400> 504
atgggggggct ttgggactaa catctcaagt actaccagct tcactctaac aggcttccct 60
gagatgaagg gtctggagca ctggctggct gcccttctgc tgctgcttta tgctatttcc 120
ttcttgggca acatcctcat cctctttatc ataaaggaag agcagagctt gcaccagcca 180
atgtactact tcctgtctct tttttctgtt aatgacctgg gtgtgtcctt ttctacattg 240
cccactgtac tggctgctgt gtgttttcat gccccagaga caacttttga tgccctgcctg 300
gcccatgatgt tcttcatcca cttttcctcc tggacagagt ttggcatcct actggccatg 360
agttttgacc actatgtggc catctgtaac ccgctgcgct atgccacagt gctcactgat 420
gtccgtgtgg ccacaaatgg catatccatt gtcacccgca gcttctgcat ggtattccca 480
cttcccttcc tcctgaagag actgcctttc tgtaaggcca gtgtggtact ggcccattcc 540
tactgtctgc atgcagacct gattcggtcg ccctggggag acactaccat caacagcatg 600
tatggcctgt tcattgtcat ctctgccttt ggtgtagatt cactgctcat cctcctctcc 660
tatgtgtcga ttctacattc tgtgctggcc attgcctcca ggggtgagag gcttaagaca 720
ctcaacacat gtgtgtcaca tatctatgca gtgctgatct tctatgtgcc tatggttagt 780
gtgtccatgg ttcatcgatt tgggagcat gctcctgaat atgtgcacaa gttcatgtct 840
ctttgtacct ccaatgctct acecaattat ctattccatc aagactaa 888

<210> 505
<211> 310
<212> PRT
<213> Homo sapiens

<400> 505
Met Asp Trp Glu Asn Cys Ser Ser Leu Thr Asp Phe Phe Leu Leu Gly
1 5 10 15
Ile Thr Asn Asn Pro Glu Met Lys Val Thr Leu Phe Ala Val Phe Leu
20 25 30
Ala Val Tyr Ile Ile Asn Phe Ser Ala Asn Leu Gly Met Ile Val Leu
35 40 45
Ile Arg Met Asp Tyr Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60
His Leu Ser Phe Cys Asp Leu Cys Tyr Ser Thr Ala Thr Gly Pro Lys
65 70 75 80
Met Leu Val Asp Leu Leu Ala Lys Asn Lys Ser Ile Pro Phe Tyr Gly
85 90 95
Cys Ala Leu Gln Phe Leu Val Phe Cys Ile Phe Ala Asp Ser Glu Cys
100 105 110
Leu Leu Leu Ser Val Met Ala Phe Asp Arg Tyr Lys Ala Ile Ile Asn
115 120 125
Pro Leu Leu Tyr Thr Val Asn Met Ser Ser Arg Val Cys Tyr Leu Leu
130 135 140
Leu Thr Gly Val Tyr Leu Val Gly Ile Ala Asp Ala Leu Ile His Met
145 150 155 160
Thr Leu Ala Phe Arg Leu Cys Phe Cys Gly Ser Asn Glu Ile Asn His
165 170 175
Phe Phe Cys Asp Ile Pro Pro Leu Leu Leu Leu Ser Arg Ser Asp Thr

180	185	190
Gln Val Asn Glu Leu Val Leu Phe Thr Val Phe Gly Phe Ile Glu Leu		
195	200	205
Ser Thr Ile Ser Gly Val Phe Ile Ser Tyr Cys Tyr Ile Ile Leu Ser		
210	215	220
Val Leu Glu Ile His Ser Ala Glu Gly Arg Phe Lys Ala Leu Ser Thr		
225	230	235
Cys Thr Ser His Leu Ser Ala Val Ala Ile Phe Gln Gly Thr Leu Leu		
245	250	255
Phe Met Tyr Phe Arg Pro Ser Ser Ser Tyr Ser Leu Asp Gln Asp Lys		
260	265	270
Met Thr Ser Leu Phe Tyr Thr Leu Val Val Pro Met Leu Asn Pro Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Leu		
290	295	300
Lys Asn Lys Ile Leu Phe		
305	310	

<210> 506
 <211> 933
 <212> DNA
 <213> Homo sapiens

<400> 506
 atggactggg aaaattgctc ctcattaact gatttttttc tcttggaat taccaataac 60
 ccagagatga aagtgacctt atttgctgta ttcttggttg tttatatcat taatttctca 120
 gcaaactcttg gaatgatagt tttaatcaga atggattacc aacttcacac accaatgtat 180
 ttcttcctca gtcactctgc tttctgtgat ctctgctatt ctactgcaac tgggcccacag 240
 atgctggttag atctacttgc caagaacaag tcaataccct tctatggctg tgctctgcaa 300
 ttcttggtct tctgtatctt tgcagattct gactgtctac tgctgtcagt gatggccttt 360
 gatcggtaga aggccatcat caacccctg ctctatacag tcaacatgtc tagcagagt 420
 tgctatctac tcttgactgg ggtttatctg gtgggaatag cagatgcttt gatacatatg 480
 aactggcct tccgcctatg cttctgtggg tctaatagaga ttaatcattt cttctgtgat 540
 atccctctc tcttattact ctctcgctca gatacacagg tcaatgagtt agtggtattc 600
 accgtctttg gttttattga actgagtacc atttcaggag ttttcatttc ttattgttat 660
 atcatcctat cagtcttgga gatacactct gctgagggga ggttcaaagc tctctctaca 720
 tgcacttccc acttatctgc ggttgcaatt ttccagggaa ctctgctctt tatgtatttc 780
 cggccaagtt ctctctattc tctagatcaa gataaaatga cctcattgtt ttacaccctt 840
 gtggttccca tgttgaacct cctgatttat agcctgagga acaaggatgt gaaagaggcc 900
 ctgaaaaaac tgaaaaataa aattttattt taa 933

<210> 507
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 507
 Met Glu Val Lys Asn Cys Cys Met Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Ile Pro His Thr Glu Gly Leu Glu Met Thr Leu Phe Val Leu Phe Leu

<400> 508

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atggagggtga agaactgctg catggtgaca gagttcatcc ttttgggaat cccacacaca 60
gagggggtgg agatgacact ttttgtctta ttcttgccct tctatgcctg cactctactg 120
ggaaatgtgt ctatccttgt tgctgttatg tcttctgctc gccttcacac acctatgtat 180
ttcttcctgg gaaacttgct tgtgtttgac atgggtttct cctcagtga cttgtccaaa 240
atgctgctct accttatggg gctgagccga ctcatctct acaaagactg tgtctgccag 300
cttttcttct tccatttctt cgggagcatt gagtgcttct tgtttacggt gatggcctat 360
gaccgcttca ctgccatctg ttatcctctg cgatacacag tcatcatgaa cccaaggatc 420
tgtgtggccc tggctgtggg cacatggctg ttaggggtgca ttcattccag tatcttgacc 480
tccctcacct tcaccttgcc atactgtggt cccaatgaag tggatcactt cttctgtgac 540
attccagcac tgttgccctt ggctgtgct gacacatcct tagcccagag ggtgagcttc 600
accaacgttg gcctcatatc tcttgtctgc tttctgctaa ttcttttatc ctacactaga 660
atcacaatat ctatcttaag cattcgtaca actgagggcc gtcgccgtgc cttctccacc 720
tgcagtgtc acctcattgc catcctctgt gcctatgggc ccatcatcac tgtctacctg 780
cagcccacac ccaaccccat gctgggaacc gtggtacaaa ttctcatgaa tctggtagga 840
ccaatgctga accctttgat ctataccttg aggaataagg aagtaaaaac agccctgaaa 900
acaatattgc acaggacagg ccatgttctt gagagttag 939
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<210> 509

<211> 313

<212> PRT

<213> Homo sapiens

<400> 509

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Met Pro Ile Ala Asn Asp Thr Gln Phe His Thr Ser Ser Phe Leu Leu
  1              5              10              15
```

```
Leu Gly Ile Pro Gly Leu Glu Asp Val His Ile Trp Ile Gly Phe Pro
              20              25              30
```

```
Phe Phe Ser Val Tyr Leu Ile Ala Leu Leu Gly Asn Ala Ala Ile Phe
  35              40              45
```

```
Phe Val Ile Gln Thr Glu Gln Ser Leu His Glu Pro Met Tyr Tyr Cys
  50              55              60
```

```
Leu Ala Met Leu Asp Ser Ile Asp Leu Ser Leu Ser Thr Ala Thr Ile
  65              70              75              80
```

```
Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Ile Lys Glu Ile Ser Phe
              85              90              95
```

```
Gly Gly Tyr Leu Ser Gln Met Phe Phe Ile His Phe Phe Thr Val Met
 100              105              110
```

```
Glu Ser Ile Val Leu Val Ala Met Ala Phe Asp Arg Tyr Ile Ala Ile
 115              120              125
```

```
Cys Lys Pro Leu Trp Tyr Thr Met Ile Leu Thr Ser Lys Ile Ile Ser
 130              135              140
```

```
Leu Ile Ala Gly Ile Ala Val Leu Arg Ser Leu Tyr Met Val Ile Pro
 145              150              155              160
```

```
Leu Val Phe Leu Leu Leu Arg Leu Pro Phe Cys Gly His Arg Ile Ile
 165              170              175
```

```
Pro His Thr Tyr Cys Glu His Met Gly Ile Ala Arg Leu Ala Cys Ala
 180              185              190
```

Ser Ile Lys Val Asn Ile Met Phe Gly Leu Gly Ser Ile Ser Leu Leu
195 200 205

Leu Leu Asp Val Leu Leu Ile Ile Leu Ser His Ile Arg Ile Leu Tyr
210 215 220

Ala Val Phe Cys Leu Pro Ser Trp Glu Ala Arg Leu Lys Ala Leu Asn
225 230 235 240

Thr Cys Gly Ser His Ile Gly Val Ile Leu Ala Phe Ser Thr Pro Ala
245 250 255

Phe Phe Ser Phe Phe Thr His Cys Phe Gly His Asp Ile Pro Gln Tyr
260 265 270

Ile His Ile Phe Leu Ala Asn Leu Tyr Val Val Val Pro Pro Thr Leu
275 280 285

Asn Pro Val Ile Tyr Gly Val Arg Thr Lys His Ile Arg Glu Thr Val
290 295 300

Leu Arg Ile Phe Phe Lys Thr Asp His
305 310

<210> 510
<211> 942
<212> DNA
<213> Homo sapiens

<400> 510
atgcctatag ctaacgacac ccagttccat acttcttcat tcctactgct gggatatccca 60
gggctagaag atgtgcacat ctggattgga ttcccttttt tctctgtgta tcttattgca 120
ctcctgggaa atgctgctat cttctttgtg atccaaactg agcagagtct ccatgagccc 180
atgtactact gcctggccat gttggattcc attgacctga gcttgtctac ggccaccatt 240
cccaaaatgc tgggcatctt ctggttcaat atcaaggaaa tatcttttgg aggctacctt 300
tctcagatgt tcttcatecca tttcttcaact gtcattggaga gcatcgtatt ggtggccatg 360
gcctttgacc gctacattgc catttgcaaa cctcttttgt acaccatgat cctcaccagc 420
aaaatcatca gcctcattgc aggcattgct gtccctgagga gcttgtacat ggtcattcca 480
ctggtgtttc tcctcttaag gttgcccttc tgtggacatc gtatcatccc tcatacttac 540
tgtgagcaca tgggcattgc ccgtctggcc tgtgccagca tcaaagtcaa cattatgttt 600
ggtcttggca gtatttctct cttgttattg gatgtgctcc ttattattct ctcccatatc 660
aggatcctct atgctgtctt ctgcctgccc tcctgggaag ctcgactcaa agctctcaac 720
acctgtggct ctcacattgg tgttatctta gccttttcta caccagcatt tttctctttc 780
tttacacact gctttggcca tgatattccc caatatatcc acattttctt ggctaatacta 840
tatgtggttg ttctctccac cctcaatcct gtaatctatg gggtcagaac caaacatatt 900
aggagagacag tgctgaggat tttcttcaag acagatcact aa 942

<210> 511
<211> 312
<212> PRT
<213> Homo sapiens

<400> 511
Met Ala Leu Gly Asn His Ser Thr Ile Thr Glu Phe Leu Leu Leu Gly
1 5 10 15

Leu Ser Ala Asp Pro Asn Ile Arg Ala Leu Leu Phe Val Leu Phe Leu
20 25 30

Gly Ile Tyr Leu Leu Thr Ile Met Glu Asn Leu Met Leu Leu Leu Val
 35 40 45
 Ile Arg Ala Asp Ser Cys Leu His Lys Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 His Leu Ser Phe Val Asp Leu Cys Phe Ser Ser Val Ile Val Pro Lys
 65 70 75 80
 Met Leu Glu Asn Leu Leu Ser Gln Arg Lys Thr Ile Ser Val Glu Gly
 85 90 95
 Cys Leu Ala Gln Val Phe Phe Val Phe Val Thr Ala Gly Thr Glu Ala
 100 105 110
 Cys Leu Leu Ser Gly Met Ala Tyr Asp Arg His Ala Ala Ile Arg Arg
 115 120 125
 Pro Leu Leu Tyr Gly Gln Ile Met Gly Lys Gln Leu Tyr Met His Leu
 130 135 140
 Val Trp Gly Ser Trp Gly Leu Gly Phe Leu Asp Ala Leu Ile Asn Val
 145 150 155 160
 Leu Leu Ala Val Asn Met Val Phe Cys Glu Ala Lys Ile Ile His His
 165 170 175
 Tyr Ser Tyr Glu Met Pro Ser Leu Leu Pro Leu Ser Cys Ser Asp Ile
 180 185 190
 Ser Arg Ser Leu Ile Val Leu Leu Cys Ser Thr Leu Leu His Gly Leu
 195 200 205
 Gly Asn Phe Leu Leu Val Phe Leu Ser Tyr Thr Arg Ile Ile Ser Thr
 210 215 220
 Ile Leu Ser Ile Ser Ser Thr Ser Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Ala Val Thr Leu Tyr Tyr Gly Ser Gly Leu
 245 250 255
 Leu Arg His Leu Met Pro Asn Ser Gly Ser Pro Ile Glu Leu Ile Phe
 260 265 270
 Ser Val Gln Tyr Thr Val Val Thr Pro Met Leu Asn Ser Leu Ile Tyr
 275 280 285
 Ser Leu Lys Asn Lys Glu Val Lys Val Ala Leu Lys Arg Thr Leu Glu
 290 295 300
 Lys Tyr Leu Gln Tyr Thr Arg Arg
 305 310

<210> 512
 <211> 939
 <212> DNA
 <213> Homo sapiens

<400> 512
atggccttgg ggaatcacag caccatcacc gagttcctcc tccttgggct gtctgccgac 60
cccaacatcc gggctctgct ctttgtgctg ttcttgggga tttacctcct gaccataatg 120
gaaaacctga tgctgctgct cgtgatcagg gctgattctt gtctccataa gcccatgtat 180
ttcttctctga gtcacctctc ttttgttgat ctctgcttct cttcagtcac tgtgccaag 240
atgctggaga acctcctgtc acagaggaaa accatttcag tagagggtctg cctggctcag 300
gtcttctttg tgtttgtcac tgcagggaact gaagcctgcc ttctctcagg gatggcctat 360
gaccgccatg ctgccatccg ccgcccacta ctttatggac agatcatggg taaacagctg 420
tatatgcacc ttgtgtgggg ctcatgggga ctgggctttc tggacgcact catcaatgtc 480
ctcctagctg taaacatggg cttttgtgaa gccaaaatca ttcaccacta cagctatgag 540
atgccatccc tcctccctct gtccctgctct gatattctcca gaagcctcat cgttttgctc 600
tgctccactc tcctacatgg gctgggaaac ttctttttgg tcttcttatc ctacaccctg 660
ataatctcta ccactctaag catcagctct acctcgggca gaagcaaggc cttctccacc 720
tgctctgccc acctcactgc agtgacactt tactatggct caggtttgct ccgccatctc 780
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<220>
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amino acid motif

<400> 513
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1 5

<210> 514
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<220>
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amino acid motif

<400> 514
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1 5

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amino acid motif

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<210> 516
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amino acid motif

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<210> 517
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<213> Artificial Sequence

<220>
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amino acid motif

<400> 517
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<210> 518
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<220>
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translocation domain

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Thr Gly Val Val
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<210> 519
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peptide

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<210> 520
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<212> PRT
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<220>
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primer

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<210> 522
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<220>
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<400> 522
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<223> a, g or p which can be the pyrimidine or purine base

<220>
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<400> 524
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